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ABSTRACT

The curriculum guide outlines learning patterns which may be adapted or adopted by the creative teacher in occupational education. Emphasis is placed on processes basic to specific job activities found within the areas of: (1) business education, (2) home economics, and (3) industrial arts. Students are able to associate, integrate, and catalog these basic processes with specific job roles or careers ranging from entry level jobs to administrative positions. The educational goal of the experiences is the adaptation of this knowledge to future decision making processes by the students. For each unit general objectives, specific objectives, processes, careers, developing core, student learning activities, and references are given. Units covered include: business communications, information processing, merchandising, clothing and textiles, foods and nutrition, home, health and community service, construction, manufacturing, power and transportation, and visual communications. The business education and home economics sections include appended tests, forms, and other instructional materials. (Author/KB)

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COURSE OF STUDY
OCCUPATIONAL, VOCATIONAL, AND TECHNICAL EDUCATION
PHASE III — 8th Grade

EXPLORATORY EDUCATION

THE BOARD OF PUBLIC EDUCATION
Pittsburgh, Pennsylvania
October 1973

OCT 6 1975
U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
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PREFACE

This publication is a part of the evolving design for teaching and learning that the professional staff of the Pittsburgh Public Schools is creating.

The curriculum is the central skeleton upon which the teacher builds the planning for learning. It gives constancy and structure to the educational process, never inhibiting or containing the freedom of the teacher, but rather encouraging him to teach creatively and innovatively within its framework.

Curriculum development in a good school system never stops. As our society changes, and as our body of academic knowledge changes, and as our knowledge of the learning behavior of children changes, so must curriculum respond. It is in this spirit that this document has been thoughtfully and conscientiously developed by our colleagues, for the good of all children and teachers in Pittsburgh. It represents the legal authority of the people through the Board of Education, in declaring what children should learn, and it represents the best judgment of our faculty in declaring the processes through which these ends are achieved.

But no curriculum guide, no matter how close to perfection it may aspire, is of any value until it is wholly possessed by all the teachers who come within its scope. Accordingly, I commend this guide to all teachers concerned, and ask that you make it a product of your own individual commitment, and contribute to its continued improvement over the years.

Superintendent of Schools

OCCUPATIONAL, VOCATIONAL, AND TECHNICAL EDUCATION

DIVISION STATEMENT

Curriculum construction is an evolutionary process. This axiom is quoted frequently by educators. However, curricula in occupational education, perhaps more than any other field, must strive in an evolutionary manner to maintain and reflect the knowledges stimulated by technology and the skills needed in a dynamic and mobile economy. Recognizing these factors, this document represents the efforts of professional personnel to insure: (1) that occupational options and electives meet the challenges offered by technology and the economy and (2) that curricula be designed to serve all youth in the Pittsburgh Public School System.

The philosophy permeating the curricula of the Division of Occupational, Vocational, and Technical Education focuses on developing an individual's potential through:

- Maintaining an environment for learning in which an individual develops initiative and self-reliance in problem-solving with regard to the world of work.

- Designing an environment for learning which fosters the development of marketable or avocational skills and knowledge.

Basically, this publication outlines learning patterns which may be adapted or adopted by the creative teacher in occupational education. The guide exemplifies what might be accomplished--it can never be termed a dictum which cannot be improved upon. It is the teacher who determines the success of any curriculum. Therefore, it becomes the responsibility of each teacher to implement the fundamental concepts presented in this guide and to work toward future improvement of the course.

Many have contributed time, effort, and funds in preparing this course of study. We acknowledge the dedicated services of all the professional and clerical staff of the Division, and we particularly acknowledge the series of curriculum grants received from the Division of Vocational Education, Pennsylvania Department of Public Instruction, John C. Struck, Director.

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TO THE TEACHER

The Phase III, 8th grade curriculum outlines more in-depth experiences of the "world of work" activities to which the students were first introduced in Phase II, seventh grade. Emphasis is placed on processes basic to specific job activities found within the areas of Business Education, Home Economics, and Industrial Arts. Students are able to associate, integrate and catalog these basic processes with specific job roles or careers ranging from entry level jobs to administrative positions. The educational goal of the experiences is the adaptation of this knowledge to future decision making processes by the students.

Students, functioning as members of large or small groups, or individually, are encouraged to develop greater inquiry abilities and participate in more specific activities, experiments, and projects. Student activities are realistic, interdisciplinary, and personal in nature.

This program incorporates individualized instruction through the development of learning activity packages, which allows students to work at a pace that is challenging, but achievable.

The learning activity packages are a guide. The teacher is encouraged to expand or revise them to fit his individual teaching situation and style.

The counseling function at this level is a unique aspect of the program. Its objective is to strengthen student decision-making for high school course selection and future career choices.

SCOPE OF PROGRAM

The Phase III Curriculum covers the ten subject areas that comprise the O.V.T. Disciplines. It is developed in self-contained modules that can be implemented by the teacher in relation to his area of specialization. The length of time spent in the area will vary, depending on the pattern of the student's choice.

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SPECIAL NOTE TO TEACHERS

Learning Activity Packages with specific activities for students are available from your supervisor. These packages are constantly updated to include the latest developments in the various areas.

EXPLORATORY OVT
LABORATORY SAFETY GUIDELINES
FOR
CONSTRUCTION, MANUFACTURING, POWER AND TRANSPORTATION, AND VISUAL COMMUNICATIONS,

1. Instructor must be present at all times.
2. Good housekeeping is a prerequisite to accident prevention.
3. All power machinery should be stopped and the main power switch pulled and locked in the event it becomes necessary for the instructor to leave the shop.
4. Eye protection should be provided and used by all students as specified in the eye protection act, page vi.
5. All machinery should be provided with adequate guards, and students are to use them.
6. Power equipment should not be used by students without proper instruction and the instructor's permission.
7. Horseplay shall not be tolerated in the school shop.
8. Much safety instruction can be given to students through the example of the instructor.
9. It is recommended that all shop teachers teach the students the proper use of the equipment at the opening of the school year and throughout the year.
10. Parental permission is preferred before pupils operate high-powered equipment.
11. Regular and systematic inspections are to be made in order to maintain clean and orderly conditions.
12. A system is to be employed to assign students specific housekeeping duties.
13. Sufficient housekeeping equipment is to be readily available.

14. Floors, walls, ceilings, lights, and windows are to be cleaned frequently and regularly.

15. Excess materials are not permitted in work areas.

16. Containers for waste materials are to be properly marked or labeled.

17. Materials and supplies are to be safely stacked, or stored in selected areas.

18. Equipment is to be arranged to permit safe work practices and ease of maintenance.

19. Tools and accessories are to be stored in suitable cabinets or racks.

20. Aisles, traffic areas, and exits are to be adequately marked and kept free of materials and debris.

EYE PROTECTION

EXCERPT: "Department of Public Instruction Newsletter"
Commonwealth of Pennsylvania
Volume 10, Number 1 - Harrisburg - August, 1965

Governor Scranton has signed a law, effective immediately, requiring persons engaged in hazardous activities, or exposed to known dangers, to use eye protective devices in educational institutions.

The new act states:

Every teacher, student, visitor, spectator and every other person in any shop or laboratory in public or private schools, colleges and universities who is engaged in or within the area of known danger created by

1. the use of hot liquids, solids or gases or caustic or explosive materials, or

2. the milling, sawing, turning, shaping, cutting, grinding or stamping of solid materials, or

3. the tempering, heat treatment or kiln firing of metals and other materials, or

4. gas or electric welding, or

5. the repairing or servicing of vehicles,

"shall wear industrial quality eye protective devices at all times while engaged in such activities or exposed to such known dangers.

". . . Schools, colleges and universities SHALL HAVE THE POWER TO RECEIVE FEDERAL, STATE AND LOCAL MONEYS AND TO EXPEND THE SAME TO PROVIDE SUCH DEVICES AND shall furnish such devices to all visitors and spectators

and all other persons required under the provisions of this act to wear them.

" . . . ENFORCEMENT OF THIS ACT SHALL BE IN ACCORDANCE WITH STANDARDS, RULES AND REGULATIONS PROMULGATED BY THE STATE BOARD OF EDUCATION.

" . . . For the purpose of this act, industrial quality eye protective devices means devices meeting the standards of the American Standard Safety Code for Head, Eye and Respiratory Protection, Z2. 1-1959, promulgated by the American Standards Association, Incorporated."

Sheet 1

EXPLORATORY OVT SAFETY CHECK SHEET

SCHOOL _____ DATE _____

TEACHER _____ SHOP _____

SURVEY BY _____ TITLE _____

A safe environment is an essential part of the school shop safety education program. The safe environment will exist only if hazards are discovered and corrected through regular and frequent inspections by school personnel -- teachers and students. Safety inspections are to determine if everything is satisfactory. Submit this check sheet at the beginning of each new school term to your immediate supervisor.

	Satisfactory	Needs Attention	Remarks
A. GENERAL PHYSICAL CONDITION			
1. Machines, benches, and other equipment are arranged so as to conform to good safety practices.....			
2. Condition of stairways			
3. Condition of aisles.....			
4. Condition of floors.....			
5. Condition of walls, windows, and ceilings.			
6. Illumination is safe, sufficient, and well placed.....			
7. Ventilation.....			
8. Temperature control.....			
9. Fire extinguishers are of proper type, adequately supplied, properly located and maintained.....			
10. Teacher and pupils know location of and use of the proper type for various fires..			
11. The number and location of exits is adequate.....			
12. Proper procedures have been formulated for emptying the room of pupils and taking precautions in case of emergencies....			
13. Lockers are inspected regularly for cleanliness.....			
14. Locker doors are kept closed.....			
B. HOUSEKEEPING			
1. General appearance as to orderliness.....			
2. There is adequate and proper storage space for tools and materials.....			
3. Benches are kept orderly.....			
4. Corners are clean and clear.....			

	Satisfactory	Needs Attention	Remarks
5. Special tool racks, kept in orderly condition, are provided at benches and machines			
6. Tool, supply, and/or material room is orderly.....			
7. Sufficient scrap boxes are provided.....			
8. Scrap stock is put in scrap boxes promptly			
9. Materials are stored orderly and in a safe condition.....			
10. A spring lid metal container is provided for oily rags and waste.....			
11. All waste materials and oily rags are promptly placed in containers.....			
12. Containers for oily rags and waste materials are frequently and regularly emptied.....			
13. Combustible materials are stored in metal cabinets.....			
C. EQUIPMENT			
1. Machines are arranged so that workers are protected from hazards of other machines, passing students, etc.....			
2. Danger zones are properly indicated			
3. All equipment control switches are easily available to the operator.....			
4. All power-driven machines are "locked off" at the master panic button switch when the instructor is out of the room.....			
5. Brushes are used for cleaning equipment...			
6. Non-skid areas are provided around machines.....			
7. Machines are in safe working condition....			
8. Machines are guarded to comply with safety regulations.....			
9. Adequate supervision is maintained when students are using machines and dangerous tools.....			
10. Tools are kept sharp, clean, and in safe working order.....			
D. ELECTRICAL INSTALLATION			
1. All switches are enclosed.....			
2. There is a master control switch for all of the electrical installation.....			
3. Electrical outlets and circuits are properly identified.....			

	Satisfactory	Needs Attention	Remarks
E. PERSONAL PROTECTION			
1. Goggles are provided and required by State law for all work where eye hazards exist.....			
2. If individual goggles are not provided, hoods and goggles are properly disinfected before use.....			
3. Shields are provided for electric welding.			
4. Aprons or shop coats are worn in the shop when necessary.....			
5. Rings and other jewelry are removed by pupils when working in the shop.....			
6. The proper kind of wearing apparel is worn for the job being done.....			
7. Leggings, safety shoes, etc., are worn in special classes such as foundry, etc., when needed.....			
8. A respirator is used when spraying in the finishing room.....			
F. INSTRUCTION			
1. Shop safety is taught as an integral part of each teaching unit.....			
2. Safety rules are posted.....			
3. Printed safety rules are given each student.....			
4. The pupils take a safety pledge.....			
5. The shop makes use of a safety inspector..			
6. There is a shop safety committee.....			
7. Safety contests are promoted.....			
8. Motion and/or slide films on safety are used in the instruction.....			
9. Safety tests are administered.....			
10. Safety posters are in evidence.....			
11. Talks on safety are given to the classes by industrial men.....			
12. Tours are taken of industrial plants as a means of studying safety practices.....			
13. Periodic safety inspections of the shop are made by a student committee.....			
G. ACCIDENT RECORDS			
1. Adequate accident statistics are kept.....			
2. Accidents are reported to the proper administrative authority.....			

	Satisfactory	Needs Attention	Remarks
3. Accident reports are analyzed for instructional purposes and to furnish the basis for elimination of hazards.....			
H. FIRST AID			
1. An adequately stocked first aid cabinet is provided at each school.....			
2. The first aid is administered by a qualified individual only.....			
3. The school has individuals qualified to administer first aid.....			

THE FOLLOWING ITEMS INDICATE DEFINITE HAZARDS. IMMEDIATE ATTENTION IS REQUIRED.

ITEM NO.	RECOMMENDATIONS

EXPLORATORY OVT
LABORATORY SAFETY GUIDELINES
FOR
MERCHANDISING, INFORMATION PROCESSING,
AND BUSINESS COMMUNICATIONS

1. Operate machinery only when instructor is present.
2. Never touch electric cords or machines with wet hands.
3. Avoid jerking electric cords when disconnecting machines or electric plugs.
4. Be sure floor outlets are covered to prevent tripping.
5. Keep electric cords from coming into contact with radiators.
6. Prevent ink, water, or oils from being spilled on the floor.
7. Remove hands and fingers from electric calculation carriage when operating machine.
8. Always use a staple remover when removing staples.
9. Remove electric cord from machines when they jam or stride.
10. Avoid wearing loose clothing or jewelry around machines with revolving parts, motors, pulleys, or gears.
11. Use a hair net or rubber band to control long hair.
12. Store flammable liquids in metal containers or safety cabinets.
13. Do not open more than one file drawer at a time. Never walk away unless top drawer has been closed. (top drawer of cabinet pulled out the entire length could cause the cabinet to tip forward)

14. Avoid horseplay with staplers, as eyes and fingers may be injured.

15. Report ALL injuries to the instructor.

16. Keep fingers away from paper cutter knife. Never leave the blade in a raised position.

17. Depress the master switch button in case of accident or fire with any electric machine.

18. Do not make adjustments while a machine is in motion.

19. Be familiar with the operation of fire extinguishers.

20. Clean hearing devices with alcohol before using.

EXPLORATORY OVT
HOME ECONOMICS SAFETY GUIDELINES
FOR
FOODS AND NUTRITION, CLOTHING AND TEXTILES,
HEALTH AND COMMUNITY SERVICES

1. When working on gas and electric ranges, the handles of all pots and containers should be turned away from the operator.

2. Electrical appliances should not be handled with wet hands.

3. When operating the waste disposal unit, the sink area should be kept clear of working utensils and foreign materials.

4. Sharp edged equipment used in chopping or peeling should be turned so that the edges of knives are turned away from the fingers.

5. A fire extinguisher and fire blanket should be available and demonstrated to all students.

6. Jewelry and clothing should be kept from tangling with cooking utensils.

7. Long hair should be tied when cooking or operating a sewing machine.

8. Food should be refrigerated promptly if it will be used the next day.

9. Sanitary procedures in washing hands and utensils should be followed when cooking, testing or researching foods to prevent bacterial infections.

10. Garbage cans should not be lined with bags and should not remain overnight.

11. Scissors should be carried with points toward the floor.

12. Pins should not be placed in the mouth.

POLICY ON ORDERING AUDIO-VISUAL AIDS

Whenever audio-visual materials other than those listed in the film catalog of the Pittsburgh Public Schools are selected for classroom use, the request for such materials should be directed to the Section on Instructional Media; Board of Public Education Service Center; 13th and Muriel Streets; Pittsburgh, Pennsylvania 15203; phone number 431-2116.

All motion picture films or other audio-visual aids to be shown must be selected by a committee of three designated by the Superintendent of Schools. All recommendations for the rental or purchase of films shall bear the endorsement of a majority of this committee and the Superintendent of Schools. (See Rules of the Board of Public Education, Section 445.)

INVITING OUTSIDE SPEAKERS

If outside speakers are desired for a classroom visit, the invitation will be extended in accordance with Board of Public Education Rules, Chapter IV, Section 475, as adopted February 24, 1970:

> A teacher, after conferring with the principal, may invite a non-faculty member to speak to a class concerning topics relevant to the subject matter then being considered by the class. The teacher should ensure that his students have ample opportunity to question the speaker, to comment on his remarks, and, without intimidation, to dispute his point of view. A committee comprised of the principal, teachers selected by the faculty, and class presidents, will periodically review the use of non-faculty speakers to ensure that speakers are being utilized to educate rather than to indoctrinate, that a balance of opinion on controversial issues is being maintained, and that students are being given the opportunity to question and dispute speakers. The provisions of this rule shall apply also to cases in which non-faculty members are invited by faculty advisors to speak before recognized extra-curricular groups.

OCCUPATIONAL, VOCATIONAL, AND TECHNICAL EDUCATION

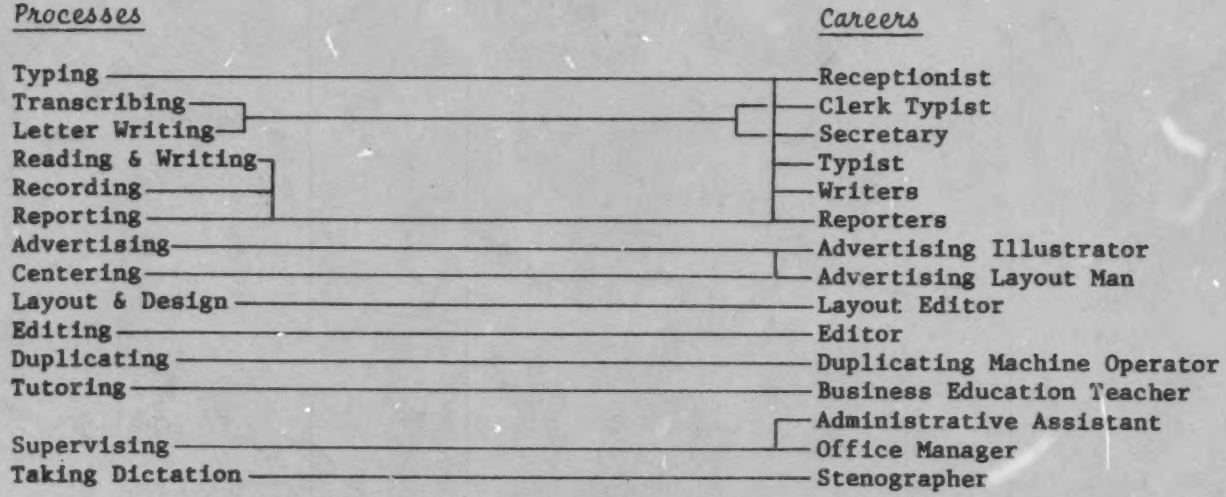
PHASE III

BUSINESS EDUCATION

UNIT I - BUSINESS COMMUNICATIONS

General Objectives

In order to explore the learning activities related to the following Processes and Careers,



The student will be able to:

- Type using the "whole word method" or the short course for the IBM Selectric, at a proficiency level which reflects an improvement upon the individual student's previous achievement.
- Follow given directions for placement of home address, date, inside address, salutation, body, and complimentary close of a letter.
- Receive visitors, screen calls, take messages, and answer the telephone, utilizing the tele-trainer unit, the typewriter, and film strips.
- Transcribe messages with 75 percent accuracy.

- Demonstrate skill in writing factually and creatively, and show growth in communicating ideas clearly and forcefully.
- Collect and analyze facts, compose and type news stories and subjective newspaper articles.
- Illustrate and design advertisements which effectively get across a message and are eye appealing, using customer (teacher) specifications.
- Design advertising layouts, and plan advertising programs and brochures, to advertise products or services from other disciplines.
- Prepare newspaper page layouts, selecting appropriate illustrative material to be included.
- Edit newspaper copy using standard copy-reading symbols, reply to correspondence, and write headlines and captions.
- Prepare and run a master unit on a duplicating machine.
- Provide instructional and tutorial assistance to fellow classmates, and supervise office staff employees.
- Center given information on 8 1/2 x 11 inch sheets of paper.
- Achieve a dictation rate of 20 words per minute, using shorthand.

OBJECTIVES:

. The student will be able to type using the "whole word method" or the short course for the IBM Selectric, at a proficiency level which reflects an improvement upon the individual student's previous achievement.

. The student will be able to explain the uses of form letters and memos in today's business office.

PROCESSES: Typing, Letter Writing.

CAREERS: Clerk Typist, Secretary.

Developing Core	*Student Learning Activities*	*References*
There is a definite need to convey thought and ideas by the written word.	Administer a typing pre-test.	*Short Course for the IBM Selectric Typewriter*
	Have the students select a module in a typewriting LAP* that begins at the point of exploration as determined by the pre-test, and have them complete the module.	Whole word typing chart: see appendix, page 70
	Have the students complete the LAP on typewriting.	
	Discuss the purpose of a memo and form letter, and have the students explain differences between the two.	*Personal and Professional Typing*, pages 53-58
	Type memos. Have the students practice typing memos and form letters.	

*Learning Activity Packages, with specific activities for students, are available from your supervisor. These packages are constantly updated to include the latest developments.

OBJECTIVE:

. Given an explanation of important parts of a business letter, the student will be able to follow given directions in placement of home address, date, inside address, salutation, body, and complimentary close of a letter.

PROCESS: Letter Writing.

CAREERS: Typist, Secretary.

Developing Core	*Student Learning Activities*	*References*
Letter placement plays an important role in the effectiveness of business correspondence. NOTE: Pre-requisite: students should know how to type.	Demonstrate placement of home address and date in terms of style used, and have the students type them in the indicated position. Demonstrate placement of inside address and salutation in terms of style used, and have the students type them in the indicated position. Have the students select the type of letter each wishes to compose from the following list: . business letter . letter of appreciation . personal letter . thank you letter, etc. Have the students compose a letter of the type they selected, checking spelling and punctuation. Then, have them compare their letters with those in the textbook or on the bulletin board, handout sheet, etc. Have the students type other letters using various styles.	*Personal and Professional Typing*, page 152 *You Learn to Type*, pages 93-97 "At Nova, Education Comes in Small Packages"

OBJECTIVE:

. Given information on human interaction with visitors and clients, the student will be able to receive visitors, screen calls, take messages, and answer the telephone, utilizing the tele-trainer unit, the typewriter, and filmstrips.

PROCESS: Communicating. CAREERS: Receptionist, Secretary, Administrative Assistant.

Developing Core	*Student Learning Activities*	*References*
The reception a visitor receives represents the attitude of the company.	Show the film, "How to be Well Groomed," and have the students list factors involved in the film.	Coronet Instructional Films
	Show the filmstrip, "The Five Magic Mirrors," and have the students write or type a report on some of the "mirrors."	SF 49.3 164 fr. color recording
	Have the students design a wardrobe to wear to an office for one week.	
	Show the filmstrip, "Secretary as a Receptionist" in a group of three or more.	F 15.4
	Have the students discuss how they feel when they are not well received.	
	Show the film "A Manner of Speaking" and allow the students to role play receiving clients and customers.	MP3 415.12 25 min. j-s color
	Ask the class to list duties of a receptionist as described in the filmstrip.	

Developing Core	Student Learning Activities	References
	Discuss the importance of making appointments.	*Strictly for Secretaries*
Accuracy in scheduling appointments is important in order to have a smooth-running business office.	Students may practice scheduling various appointments using an appointment book and appointment cards.	*Clerical Office Procedures*
Communicating with people is of vital importance to a business.	Have the students determine the nature of a call, as well as the person and/or department that should receive the call, using the tele-trainer.	
	Ask the class to evaluate a sample telephone message form by discussing the important parts: . date . time . receiver of message . caller's name . phone number . message	
	Develop a list of examples of what could happen when correct procedures are not followed.	Film: "A Manner of Speaking," Bell Telephone Company

Developing Core	*Student Learning Activities*	*References*
	Have the students select and complete the appropriate LAP.	AT&T, *The Voice With a Smile*, Bell Telephone Company
	Telephone pads may be used for practice in recording various messages.	
Accurate messages save you and your employer from embarrassment.	Using a taped telephone conversation, allow the students to analyze choice of words, tone, inflection, and proper word usage.	AT&T, *How to Succeed in Business by Telephone*, Bell Telephone Company

OBJECTIVES:

- The student will be able to transcribe a message with 75 percent accuracy.
- The student will be able to demonstrate skill in writing factually and creatively, and show growth in communicating ideas clearly and forcefully.

PROCESSES: Transcribing, Reading, Writing.

CAREERS: Secretary, Writer, Reporter.

Developing Core	*Student Learning Activities*	*References*
The use of the transcriber saves an employer time and money.	Demonstrate the procedure for transcribing a message, and allow the students to practice transcribing various messages.	IBM prerecorded belts or teacher-prepared belts
"The newspaper contributes to and influences a nation's policies."	Review with the students various sections of newspapers they have gathered, and have them select articles written by outstanding local and national newspaper writers.	*Using Mass Media in the Schools*, pages 212-226 *How to Plan and Produce Newspapers for Schools, Clubs and other Organizations*
	Have the students pick out main ideas and distinguish between facts and opinions.	
	Discuss the "who, what, where, why, when, how" aspects from several articles.	
	Use selected articles as models for writing news, feature stories, editorials.	
	Use the movie, "The Newspaper Story."	The Pittsburgh Press

OBJECTIVE:

. The student will collect and be able to analyze facts from which he will compose and type news stories and subjective newspaper articles.

PROCESS: Recording.

CAREERS: Reporter, Feature Editor.

Developing Core	*Student Learning Activities*	*References*
Collected, analyzed facts comprise a valid newspaper article.	Have the students, through interviewing, investigating, and observing, collect and analyze facts about events in your department, other departments, the home, school, and community. From facts gathered and analyzed, have the students compose a news story (length and topic of article will be of students' choice). Discuss the news articles to determine if the following questions were answered: Who — Why What — When Where — How Arrange a field trip to the Pittsburgh Press to observe how a newspaper is printed, placement of articles, and how the organization makes its money.	*Slithery Snakes and Other Aids to Children's Writing.* "Creating a Climate for Writing" *Occupations and Careers,* pages 48-49, 191, 200, 346 *A Student-Centered Language Arts Curriculum, Grades K-13: A Handbook for Teachers,* pages 354-360

Developing Core	*Student Learning Activities*	*References*
Subjective newspaper articles appeal to particular interests of readers.	Discuss the purpose and characteristics of a general news article, a feature article, and an editorial. Have the students list everything to be included in a feature article, collect and analyze facts which pertain to a special area (such as sports, fashion, or food), and compose a newspaper article including those facts. Have the students compose a subjective newspaper article (humorous or narrative), placing emphasis on writing style and personal viewpoint rather than on specific facts or events.	

OBJECTIVE:

. The student will be able to illustrate an eye appealing advertisement, which effectively gets across a message, using his own design and customer (teacher) specifications.

PROCESS: Advertising.

CAREERS: Advertising Illustrator.

Developing Core	*Student Learning Activities*	*References*
A well designed and illustrated advertisement enhances the product which makes it more appealing to the customer.	Ask the students to report on the purposes of advertising. Demonstrate the effects created by various finishing techniques, and have the students select techniques best suited to produce a desired visual effect for each of the advertisements: . pen and ink . watercolor . pastels . tempra . crayons Then, have them finish the designs including all details. Have the students sketch illustrations of advertisements submitted by clients (teacher) according to specifications.	*Fundamentals of Selling.* pages 433-488

OBJECTIVES:

- The student will be able to design advertising layouts and plan programs and brochures to advertise products or services from other disciplines.
- The student will be able to prepare newspaper page layouts, selecting appropriate illustrative material.

PROCESSES: Advertising, Layout and Design. CAREERS: Advertising Layout Man, Layout Editor.

Developing Core	*Student Learning Activities*	*References*
An attractive advertising layout can effectively sell a promotional campaign.	Have the students do the following: . Design an advertising layout from client (teacher) specifications. . Demonstrate the effects created by using various arrangements, and draw or paint a sample for client (teacher) approval. . Arrange drawings or photographs in well-balanced artistic style, and decide upon the physical arrangements and style of type for the advertisement. . Design the final layout, and prepare two brochures: one for a product, and one for a service.	*Fundamentals of Selling*

Developing Core	*Student Learning Activities*	*References*
Attractive layout is appealing to the readers, and attracts attention to specific items.	Ask the students why an attractive layout is important, and how it can be achieved. Have the students prepare an illustration to be placed in a layout, and prepare a detailed page layout. Have the students select illustrative material and determine the portion to be reproduced.	

OBJECTIVE:

. The student will be able to edit newspaper copy using standard copy reading symbols, reply to correspondence, and write headlines and captions.

PROCESS: Editing.

CAREERS: Editor.

Developing Core	*Student Learning Activities*	*References*
It is very important that articles are proofread and edited before publication.	Have the students list standard copy reading symbols (standard to business and newspapers) and identify their meaning. Then, have them edit newspaper copy for spelling, punctuation, and grammatical errors. Given various articles, have the students write and complete headlines. Determine what each was trying to say. Have the students verify facts, dates, and statistics in articles from standard reference sources, and have them rewrite articles for greater consistency, clarity, and adherence to space limitations of the publication. Allow the students to practice writing headlines and captions for articles and illustrations, and have them type replies to routine correspondence.	*Personal and Professional Typing*, page 55

OBJECTIVE:

. The student will be able to prepare and run a master unit on a duplicating machine.

PROCESS: Duplicating. CAREERS: Secretary, Duplicating Machine Operator.

Developing Core	*Student Learning Activities*	*References*
Time and energy are saved through duplication.	Display a master unit to show the parts, and how they are used. (Teacher will act as a resource person to answer questions or give directions.)	
	Have the students type a poem, letter, or story on a master unit.	
	Demonstrate the use of the duplicating machine, and have the students run master units, checking copies for smeared printing, wrinkles, tears, and uneven color distribution.	Ditto, *Instructions for Care and Operation of Ditto Process Duplicator*
	Have the students prepare and run greeting cards using master units in various colors.	

OBJECTIVE:

. The student will be able to provide instructional and tutorial assistance to fellow classmates, and supervise office staff employees.

PROCESSES: Tutoring, Supervising.

CAREERS: Business Education Teacher, Administrative Assistant, Office Manager.

Developing Core	*Student Learning Activities*	*References*
Promoting efficiency is of prime importance in any organization.	Have students provide tutoring or instruction for those students who need assistance in completing activities in Business Communications. Have the students edit completed work of office staff giving attention to placement, spelling, and typing errors. Allow the students to plan an office party, arranging all of the following details: . food . entertainment . day . cost . place . invitations Then, have them coordinate and implement the work flow. Allow the students to distribute and collect all equipment and materials used within the department.	*Business Principles and Management*, pages 573-587

OBJECTIVES:

. The student will be able to center typed copy on an 8 1/2 x 11 inch sheet.

. The student will be able to take shorthand and achieve a dictation rate of 20 words per minute.

PROCESSES: Centering, Taking Dictation. CAREERS: Clerk Typist, Stenographer, Secretary.

Developing Core	*Student Learning Activities*	*References*
The appearance of typed copy will aid in effectiveness of presentation.	Use transparencies to show techniques in centering information on an 8 1/2" x 11" page Have the students type from written copy and center information on a page.	*Personal and Professional Typing*, page 124
The ability of a secretary to take dictation will save time for an employer.	Use the complete lessons in a shorthand book with the students, and have them take dictation using shorthand or notehand.	Gregg Shorthand or Notehand Books.

BUSINESS TRAINING LABORATORY - WASHINGTON EDUCATION CENTER

The Business Training Lab is an extension of Business Education and should be used to facilitate the teaching-learning processes in Business Communication, Information Processing, and Merchandising.

Primary purpose is to give students:

1. A workable and comprehensive overview of all major classes of business machines widely used in today's business office, with skills being a by-product rather than an end result.

2. Research projects and investigations in the present and futuristic use of equipment in business.

3. Job skills training relative to the following:

   - Business attitudes and behavior; getting along with co-workers, problem solving, etc.
   - Personal development (dress, oral communication, etc.)
   - Training of personnel for simulated activities
   - Team learning

The following business equipment will be used:

Typewriters
- portable
- IBM Selectrics

Calculating Machines
- ten key adding machines
- full keyboard machines

Duplicating Equipment
- stencil
- fluid
- mimeoscope

Copying Equipment
- Thermo-fax
- Gesteflax Scanner

Teletrainer Unit

It is hoped that clearly-written LAPs (Learning Activity Packages) will be developed for each piece of equipment so that students may progress at their own pace.

Specific objectives correlating the function of the Business Training Lab with each area of the business education program have been checked for your information.

OBJECTIVE:

- The student will be able to prepare and run master units on the spirit duplicator, and stencils on the Gestetner.

PROCESS: Duplicating.

CAREERS: Duplication Machine Operator.

Developing Core	Student Learning Activities	References
Duplicating is the fastest way of reproducing copies.	Explain the parts of the master unit: . Master sheet (writing sheet) . Cushion sheet . Carbon sheet Have the students prepare a sign or advertisement using a master unit. Have the students prepare a "French Fold" greeting card using two or more colors (red, green, blue, black, and purple) using a master unit. Allow the students to run the master units. Demonstrate the operation of the Gestetner duplicator and have the students run reports they have typed on stencils.	Gestetner instruction booklet

OBJECTIVES:

- Using the dictating and transcribing unit, the student will be able to dictate and transcribe a message with 75 percent accuracy.
- Given a list of problems involving addition, subtraction and multiplication, the student will be able to solve them using the adding machines with 100 percent accuracy.

PROCESSES: Transcribing, Calculating. CAREERS: Clerk-Typist, Secretary.

Developing Core	*Student Learning Activities*	*References*
The voice transcribing unit often replaces shorthand dictation.	Demonstrate the transcribing unit. Have the students compose a letter to one of the production areas of the company (asking for specific information about the area); dictate the letter into the dictating unit; play the letter back and make necessary corrections; and transcribe the letter using the transcribing unit and typewriter.	
Proficiency in the use of adding machines will save time and money.	Demonstrate use of the 10-key adding machine for addition, subtraction and multiplication. Have the students work the addition, subtraction, and multiplication problems on a handout sheet.	

UNIT II - INFORMATION PROCESSING

General Objectives

In order to explore the learning activities related on the following Processes and Careers,

Processes	*Careers*
Interviewing	Personnel Clerk Personnel Interviewer
Writing Checks	Payroll Clerk
Reconciling a Bank Statement	Bookkeeper
Processing Bank Forms	Teller
Opening a Bank Account	New Accounts Clerk
Supervising	Personnel Supervisor
Computing a Payroll	Payroll Clerk
Key Punching	Keypunch Operator
Programming	Programmer
Record Keeping	Record Keeper

The student will be able to:

- Direct and assist applicants in completing required forms (application forms, health records) and interest tests, placing applicants in a suitable position, and aiding in co-worker relations.
- Supervise and coordinate activities of workers in the Personnel Office having been given input relating to duties of a supervisor and human interactions involved.
- Be able to write a check with 100 percent accuracy.
- Prepare a bank reconciliation statement, and balance the statement with a checkbook.
- File names with 100 percent accuracy.

- Receive checks and cash for deposit, cash checks, issue receipts for deposits, and record financial transactions.
- Assist applicants for new accounts in completing application forms and deposit slips, and explain details of the service charge.
- Enter data into the cash receipts and cash payments journals and compute the balance from prepared recordkeeping forms.
- Use the IBM simulated keypunch to complete numerical and alphabetical keypunch exercises.
- Compute net wages or salary for each employee, recording them in the payroll register and preparing checks.
- Perform the punched card method of data processing, and explain how this relates to the electronic method.
- Develop flowcharts for handling data.
- Compute the net income or net profit from a given list of transactions.
- Punch, verify, interpret, and sort computer cards manually with the use of a code sheet.

OBJECTIVE:

- Given a simulated situation, the student will be able to direct and assist applicants in completing required forms (application forms, health records) and interest tests, placing the applicant in a suitable position, and aiding in co-worker relations.

PROCESS: Interviewing. CAREERS: Personnel Clerk, Personnel Interviewer.

Developing Core	*Student Learning Activities*	*References*
A thorough interview of a perspective employee speeds up the hiring process.	Have the students list and define at least seven personality traits required of a personnel interviewer. Demonstrate how an interview is conducted. Discuss job possibilities using listings of jobs available, and qualifications needed for each job. Acquaint the students with company policies, its product or service, kinds of jobs available, and hiring policies and practices. Have the students prepare questions about the applicant's background, present status, and future plans, and allow them to interview fellow students following guidelines presented in teacher demonstrations.	*Dictionary of Occupational Titles*, 1965, Vol. 1 *Definitions of Titles*, 3rd Ed., page 249 *Occupations and Careers*, pages 115-119 *Clerical Office Procedures*, pages 557-568 *Information-Communications Occupations*

Developing Core	*Student Learning Activities*	*References*
	Have the students do the following:	
	. Direct and assist applicants in completing an interest test.	
	. Score and analyze the applicants' tests.	Compulearn System Inc., Random House
	. Counsel applicants on the results of the interview test.	
	. Correlate (match) the applicants' personalities with suitable positions.	
	. Complete employment application forms.	
Keeping up company morals is the responsibility of the Personnel Division.	. Interview new employees again to make sure that any problems with the employer or co-workers are solved.	
	. Make a self analysis by answering a prepared questionnaire.	

OBJECTIVE:

- Given input relating to duties of a supervisor, and the human interactions involved, the student will be able to supervise and coordinate activities of workers in the personnel office.

PROCESS: Supervising.

CAREERS: Personnel Clerk Supervisor.

Developing Core	*Student Learning Activities*	*References*
Coordinated and supervised work in the personnel office facilitates accurate placement of applicants and insures up-to-date records.	Administer a personality test and allow the students to see their scores to determine whether they have the necessary personality to perform various jobs. Have the students assist employees in their duties. On a check sheet, have the students note performance of other employees, rating their performance and advising the instructor. Have the students distribute and collect all equipment and supplies used in the office.	

OBJECTIVE:

. The student will be able to write a check with 100 percent accuracy.

PROCESSES: Writing Checks, Reconciling a Bank Statement. CAREERS: Payroll Clerk, Bookkeeper.

Developing Core	*Student Learning Activities*	*References*
Writing a check accurately will save time when the check is cashed.	Show a transparency dealing with parts of a check and which parts are necessary for the check to be legal: . date . payee . amount--written and in figures . signature . endorsement	*Clerical Office Procedures*, pages 506-514 Appendix, page 73
	Assign the LAP in information processing dealing with "Reconciling a Bank Statement".	Available from supervisor
	Show a transparency on the different types of endorsements and discuss the use of each.	
	Have the students write a check using the written problems and a chart showing suggestions for writing a check: . Use ink. . Complete the stub, then the check. . Make it clear and legible. . Correct spelling of amounts is necessary. . Void the check and stub if an error is made.	Chart to be constructed by teacher

OBJECTIVE:

. Given a series of canceled checks, and a bank reconciliation statement, the student will be able to prepare and balance the statement with his checkbook.

PROCESS: Reconciling a Bank Statement. CAREERS: Bookkeeper.

Developing Core	*Student Learning Activities*	*References*
Balancing a checkbook and bank statement is an important form of personal record-keeping.	Discuss recordkeeping and why it is important to the student as well as to a company. Discuss what it means for an account to be reconciled. Display and discuss the information on a bank statement. Discuss the following: . What is a check? . What are the important parts of a check? . What should you do if a mistake is made when writing a check? Have the students define the term "canceled check." Using sample materials, have the students follow the steps (shown on a chart) involved in reconciling a	*Clerical Office Procedures*, pages 506-523

Developing Core	Student Learning Activities	References
	bank statement, and then have them use this information to reconcile a sample bank statement, following the appropriate steps. Arrange a field trip to a bank, and have the students consider opening an account at the bank of their choice.	

OBJECTIVE:

. The student will be able to file names with 100 percent accuracy.

PROCESS: Filing.

CAREERS: File Clerk.

Developing Core	*Student Learning Activities*	*References*
Records kept in order and up-to-date aid in finding information rapidly.	Discuss the following terms: . index . code . sort	*Clerical Office Procedures*, pages 182-228 *Business Principles and Management*, pages 479-491
	List and discuss the four basic rules of filing . Arrange names in units. . When unit 1 is the same, use unit 2. . When units 1 and 2 are the same, use unit 3. . Prefixes in the last name are considered part of the last name.	
	Have the students complete filing exercises from a sample kit on alphabetical filing, and have them code the items (using colored pencil), and sort the cards.	
	Show the film, "Filing Procedures in Business."	MP 419.5 12 min. b/w
	Assign the LAP dealing with filing.	Available from supervisor

OBJECTIVE:

. The student will be able to receive checks and cash for deposit, cash checks, issue receipts for deposits, and record financial transactions.

PROCESS: Processing Bank Forms (checks, deposit slips). CAREERS: Teller.

Developing Core	*Student Learning Activities*	*References*
Deposits and withdrawals handled accurately by experienced, well-trained personnel prevent discrepancies in financial transactions.	Have the students do the following: Receive checks and cash for deposit, verifying the amount and endorsement on the back of the check. Issue receipts for deposits. Cash checks and pay out money upon verification of signatures and customer balances. Order a supply of cash to meet the needs of the day. Report how many incorrect checks and deposit slips were accepted by the teller.	

OBJECTIVE:

- Given input on bank procedures and forms for opening a new account, the student will assist new account applicants in completing application forms and deposit slips, and explain details of the service charge.

PROCESS: Opening a Bank Account.

CAREERS: New Accounts Clerk.

Developing Core	*Student Learning Activities*	*References*
The gathering of complete and accurate data is a prerequisite to opening and maintaining bank accounts.	Show a transparency or chart illustrating a completed application form and deposit slip. Stress the important parts and show why they are important. Give several problems requiring the students to complete deposit slips. Have the students fill out an application form for a new account, and assist the applicants in completing information and signature cards. Discuss the service charge and cost. Issue deposit slips and explain how they should be completed. Have the students check references of applicant, and randomly check information and signature cards for completeness.	*Clerical Office Procedures*, pages 515-518

OBJECTIVE:

- The student will be able to enter data into the cash receipts and cash payments journals, and compute balance from prepared recordkeeping forms.

PROCESS: Bookkeeping.

CAREERS: Accountant, Bookkeeper.

Developing Core	*Student Learning Activities*	*References*
Recordkeeping is an important function of any organization.	Discuss the following terms: cash receipt cash payment cash balance journal crossfooting Have the students record lists of transactions on proper journals. Then, have them prepare a check for each cash payment, completing the check and stub. Finally, have them verify totals by crossfooting, and find the checkbook balance.	*Business Principles and Management*, pages 441-467

OBJECTIVE:

. The student will be able to use the IBM simulated keypunch to complete numerical and alphabetical keypunch exercises.

PROCESS: Key Punching.

CAREERS: Key Punch Operator.

Developing Core	*Student Learning Activities*	*References*
	Discuss the purpose of keypunching.	*Business Principles and Management*, pages 421-439
	Demonstrate how to insert the keypunch element into the typewriter.	*Clerical Office Procedures*, pages 106-140
	Have the students set paper guides and margins to accommodate an 80-column card (0-80), and set tabs.	*You Are a Data Processor,*
	Assign punch number exercises as well as punch invoice exercises.	*Computers, People, & Data*
	Have the students decode messages from computer cards, and print the messages on top of the cards.	
	Discuss the purpose of the sorter (puts punched cards in numerical or alphabetical order).	
	Have the students file cards by social security number, from lowest to highest, from prepunched cards. Then, have them file cards in alphabetical order.	

OBJECTIVE:

. Considering base pay and social security and tax deductions, the student will be able to compute net wages or salary for each employee, recording them on the payroll register, and preparing checks.

PROCESS: Computing a payroll.

CAREERS: Payroll Clerk.

Developing Core	*Student Learning Activities*	*References*
It is important that employees be compensated accurately for their time and energy devoted to the company.	Have the students type payroll registers with employees' names listed alphabetically, by division. Using calculators, have the students compute for each employee: . hours worked . wages or salary earned . deductions . net pay Have the students post net wages or salary on a payroll sheet, and type paychecks and stubs for each employee.	Appendix, page 74

OBJECTIVE:

. The student will be able to perform the punched-card method of data processing, and identify how this relates to the electronic method.

PROCESS: Key Punching.

CAREERS: Keypunch Operator.

Developing Core	*Student Learning Activities*	*References*
Cards must be punched before they enter the computer. If they are not punched accurately, the information received from the computer will not be accurate.	Show a video tape on data processing and discuss related jobs. List jobs that deal with computers, such as: . data processing . keypunching . computer programming Arrange a field trip to a data processing center, and have the students report on what they observed. Have the students collect personal data from employees' application forms, and code and punch employee file cards using the port-a-punch: . name . age . job . salary . deductions Have the students prepare employees' personal data cards and check the print-out of employee listings.	Allegheny High School, North Side

OBJECTIVE:

. The student will be able to develop flow charts for handling data.

PROCESS: Programming.

CAREERS: Programmer.

Developing Core	*Student Learning Activities*	*References*
Detailed instructions tell the computer in a step-by-step sequence exactly what to do and when to do it.	Discuss the term "flowchart," and the uses of flowcharts. Display an example of a flowchart. Have the students sketch the flowcharts of the following: 1. Application forms completed in the personnel office 2. Hours originally recorded on time cards to finally determine paycheck 3. Data collected from Accounts Clerk 4. Data collected from Bookkeeper Ask the students to suggest other possible uses of flowcharts within the company, and submit sketches for their ideas.	*Computers, People, & Data,* page 42 *You Are a Data Processor,* page 50

OBJECTIVE:

. Given a list of transactions, the student will be able to compute the net income or net profit.

PROCESS: Record Keeping.

CAREERS: Record Keeper.

Developing Core	*Student Learning Activities*	*References*
An accurate account of financial transactions will prevent discrepancies and aid a company in knowing its financial condition.	Discuss the terms "income," and "expense." Discuss the following statement: "Income - expense = net profit or net loss." Display by use of a chart or overhead projector, an income statement. Discuss the term "income statement" and its parts. Have the students complete an income statement from the information given. Discuss similarities between a company's income statement and a personal budget. . What is a budget? . What information should be considered in determining a budget? (income and expense) . How will having a budget help you?	*Clerical Office Procedures*, page 416

OBJECTIVE:

. The student will be able to punch, verify, interpret, and sort computer cards manually with the use of a code sheet.

Developing Core	*Student Learning Activities*	*References*
Note: The information for the transactions which the students will be using in the record-keeping lessons should be obtained from the merchandising or banking units of information processing.	Display and discuss a computer card, pointing out the following: . 80 vertical columns . 12 rows . Digit rows - rows 1 to 9 . Rows zero, 11 and 12 are Zone Rows. . Numbers are represented by a hole in one of the digit rows. . Letters are represented by a hole in a zone row and a digit number in the same vertical column. Show a diagram of an IBM Computer Code Sheet. Using a code sheet and computer card, have the students punch the following names (write name on top of card): 1. (Their own names) 2. Jackson Five 3. Mark Spitz 4. Columbo 5. Bill Cosby	*You are a Data Processor,* page 19

Developing Core	Student Learning Activities	References

Discuss the purpose of the verifier:

- Checks accuracy of punched holes
- Repunches computer card to detect any errors
- Will make notch in upper right-hand corner of correct cards

Have the students verify prepunched cards. If card is incorrect, repunch card correctly.

Discuss the purposes of the interpreter:

- Translates punched holes into printed characters
- Gets larger print than keypunch machine or relocate printing

UNIT III - MERCHANDISING

General Objectives

In order to explore the learning activities related to the following Processes and Careers,

Processes	*Careers*
Researching	Market Researcher
	Assistant Buyer
Management	Buyer
Promoting	Manager
Selling	Salesperson
Taking Inventory	Stock Clerk
Storage	Receiving Clerk
	Pricing Clerk
Change making	Cashier-Checker

The student will be able to:

- Explain the processes involved in the marketing function (researching, assembling, buying, storing, selling, merchandising, financing, and risk taking) by reading, viewing, and collecting all available material.
- Determine factors affecting a customer's choice of one product rather than another through research and disucssion.
- Research product demand and gather realistic price information to aid in setting prices for merchandise to be sold.
- Survey market factors and design advertisements to help sell products.
- Prepare a sales presentation using the facts obtained from product research.
- Prepare order forms for purchase of merchandise after reviewing stock levels and analyzing market research data on potential products.

- Prepare an inventory statement with 100 percent accuracy.
- Indicate the best method of storing merchandise.
- Prepare a selling technique designed to gain a customer's attention and interest.
- Utilize principles of display composition and packaging by decorating a showcase or display area.
- Consult with buyers before authorizing an order of merchandise, and price that merchandise according to data from market research.
- List personal characteristics that a successful salesman should possess and explain why each is important.
- Add and check a series of sales documents with 100 percent accuracy.
- Make change using the correct procedure.
- Supervise flow of work and activity within the merchandising area by taking charge of all equipment and materials used by or for the employees.
- Participate actively in a selling activity.

OBJECTIVE:

. The student will be able to explain the processes involved in the marketing function (researching, assembling, buying, storing, selling, merchandising, financing, and risk taking) by reading, viewing, and collecting all available material.

PROCESS: All Marketing Processes.

CAREERS: All Marketing Careers.

Developing Core	*Student Learning Activities*	*References*
"Marketing includes all the activities of moving goods from producer to consumer and of changing the goods' ownership."*	Have the students define the following terms: Market Researching Assembling Buying Storing Selling Merchandising Financing Risk Taking Have the students prepare a notebook explaining each process, and tell how each process relates to the marketing function.	*Fundamentals of Selling*, pages 15-21

*Fundamentals of Selling, page 15.

OBJECTIVE:

- The student will be able to determine factors affecting a customer's choice of one product rather than another, through research and discussion.

PROCESS: Market Researching.

CAREERS: Market Researcher.

Developing Core	*Student Learning Activities*	*References*
Several factors influence customer buying habits.	Discuss primary buying motives and selective buying motives.	*Business Principles and Management*, page 159
	Ask several students why they buy certain products (determining motives), and record results according to the following catagories: . Type of product . Type of consumer . Basic reason for buying . Buying motive involved	*Fundamentals of Selling*, pages 112-150, 434-506
Advertising cues appeal to specific buying motives.	Describe how advertising cues appeal to specific buying motives by devising a list of commercials and ads. Show the following: . Basic product . Cue words . Buying motives	
	Have the students bring in ads for mini bikes, cosmetics, and other products and discuss variations in prices of each.	Current magazines; newspapers

Developing Core	Student Learning Activities	References

Have the students construct a display of lures such as trading stamps, contests, offers, coupons, and gifts.

Allow the group members to relate stories of recent purchases. Have the group determine factors that were involved.

Ask the students to give a dramatic presentation which will appeal to selected senses or emotions.

Have the students prepare a script for video taping, discussing and dramatizing the following:

- Reasons for buying fad products
- The influence entertainment groups have on current dress
- The influence of peer groups
- Current events which influence buying habits
- Parents' influence on family taste
- Fad products owned by students (beads, wire glasses, etc.)

OBJECTIVE:

. The student will be able to gather research about product demand, and gather realistic information to aid in setting prices for merchandise to be sold.

PROCESS: Researching.

CAREERS: Market Researcher, Assistant Buyer, Buyer, Manager.

Developing Core	*Student Learning Activities*	*References*
Research information is valuable in deciding what goods to purchase and at what price the products should be sold.	Discuss the sale-related occupations in the area of marketing: . market researcher . assistant buyer . buyer . store manager	Science Research Associates, Inc., Chicago, Illinois
	Have the students list various methods which can be used to find customer preferences: . survey . questionnaire . interview	*Fundamentals of Selling*, page 139
	Have the students carry out a survey, a questionnaire, and an interview, and do the following: . Compile the information and give it to the buyer. . Conduct a survey of prices in the real world, getting actual prices from a wholesaler, and keep a check on the number of products sold.	

OBJECTIVE:

. The student will be able to survey market factors and design advertisements to help sell products.

PROCESS: Promotion.

CAREERS: Advertiser.

Developing Core	*Student Learning Activities*	*References*
Getting the public interested in your store and your products is the main job of advertising.	Discuss the term "communications."	*Webster's New World Dictionary*
	Have the students interpret the importance of communications in selling a product.	
	Describe the four major elements of communications (sender, receiver, medium, message) by evaluating an advertisement from a magazine or newspaper.	
	Have the students design an advertisement and let the other members of the class discuss their interpretation of the message.	
	Discuss the basic principles of advertising, using the following questions: . Why do people advertise? . Whose attention do you want to attract? . What means do you use to attract attention? . What other effects do you want your advertisement to achieve, besides gaining attention? (interest, desire, action)	*Fundamentals of Selling*, page 436 *Business Principles and Management*, page 173

Developing Core	Student Learning Activities	References

Using goods and services offered, have the students develop advertising "gimmicks" which members of the class will criticize.

Have the students design and illustrate advertisements to be used in retail outlets, and have them prepare a commercial about products and services using one of the following media:

- brochure
- intercom
- tape recording
- video tape
- bulletin board

OBJECTIVE:

. The student will be able to prepare a sales presentation using the facts obtained from product research.

PROCESS: Selling.

CAREERS: Salesperson.

Developing Core	*Student Learning Activities*	*References*
The salesperson must assume part of the responsibility for helping consumers get the right product information to make wise purchases. The reward will be more customers.	Have the students research requirements for a selling career. Use the film, "Know Your Facts," 9 min., color, SM 421.6. Discuss the three basic classes of goods: . convenience goods . shopping goods . specialty goods Explain why it is important to know these three classes of goods. From a prepared list of goods, have the students classify each item into one of the three categories. Have the students list four sources which will help them know more about their products: . direct experiences . other people . literature . incidental sources	*Fundamentals of Selling*, pages 28, 29, 55-57, 70-76 *Fundamentals of Selling*

Developing Core	Student Learning Activities	References
	Ask the students to study a given product carefully and type a list of everything they notice, such as color, size, durability, shape, and usability.	
	Give the students an opportunity to answer questions from the class regarding the given products in the previous activity.	
	Ask the students to select qualities of various products that they feel are major selling points, and have them explain their reasons.	

OBJECTIVE:

. The student will be able to prepare order forms for the purchase of merchandise after reviewing stock levels and analyzing market research data on potential products.

PROCESS: Ordering Products.

CAREERS: Buyer, Supply Clerk.

Developing Core	*Student Learning Activities*	*References*
A close check on how merchandise is selling, and an analysis of data on potential products, indicate to the buyer the quantity of goods to be ordered.	Discuss the sale-related occupations in the area of marketing. Obtain sample products which might be purchased and resold, and have the students list reasons a product would or would not be sold in the mart. Have the students analyze research data from the market research analyst on potential products. Then, have them check the quality of merchandise to be purchased and resold. Allow the students to prepare order forms for purchase of merchandise from appropriate sources, specifying the following: quantity description stock number cost due date	Professional buyer

22

OBJECTIVE:

- Given an incoming shipment, the student will be able to prepare an inventory statement with 100 percent accuracy.

PROCESS: Taking Inventory.

CAREERS: Stock Clerk, Receiving Clerk.

Developing Core	*Student Learning Activities*	*References*
Stock control procedures tell the merchandiser what is selling and what isn't, so that he can adjust his merchandising techniques accordingly.	Discuss the term "physical inventory." Have the students receive merchandise and take a physical inventory, checking the condition of the shipment received. Then, have them write a description of the shipment including the following: . item . size . color . particular characteristics	*Fundamentals of Selling*, pages 419-420
Color coding aids in inventory by enabling the clerk to spot-check variety and number of products available.	Have the students make price tags for products, color coding the tags for each different item. Display an inventory report form, and discuss what information is necessary. Then, allow the students to complete an inventory report form using an adding machine to get totals.	

Developing Core	Student Learning Activities	References
	Have the students keep a perpetual and physical inventory and prepare a requisition for restocking the selling area. Recommendations to the buyer for quantities to be reordered, based on a check list, should be made by the students.	

OBJECTIVE:

. Given a list of items, the student will be able to indicate the best method of storing each.

PROCESS: Storage.

CAREERS: Stock Clerk, Receiving Clerk.

Developing Core	*Student Learning Activities*	*References*
The care of merchandise is important because the company will lose money if the products are damaged.	Discuss aspects for consideration, when storing merchandise or supplies, by using a chart displayed in the room. Ask the students to list the two categories in which merchandise can be classified: perishable, or non-perishable. Explain the care needed to be taken when storing each of these two types of merchandise. Have the students package merchandise for storage, and then store the merchandise. Discuss the importance of clear and adequate identification of stored packages. Have the students suggest ways of keeping track of stored merchandise, and put some of these ideas into practice.	Prepared by teacher

OBJECTIVE:

. The student will be able to prepare a selling technique designed to gain a customer's attention and interest, and convince a customer to buy a product.

CAREERS: Salesperson.

PROCESS: Selling.

Developing Core	*Student Learning Activities*	*References*
The process of selling a product involves attracting a customer's attention, gaining his interest, kindling his desire, and inducing him to act.	Use the film, "You've Sold Me, Mrs. Marlow," 9 min., color, SM 421.5. Discuss various ways of gaining attention when opening the sale and presenting the merchandise. Using the tape recorder, develop with the students a tape showing how the seller can show an interest in the customer.	
Specific techniques convince a customer to buy, so it is important to know why a customer buys a product.	Have the students list eight buying motives of a customer. Discuss commercials on TV, and indicate why they do or do not appeal to you. Ask each student to role play a salesman convincing a customer who has objections to buying a product, and evaluate using a check sheet. Have the students list salable points of all products which will be sold.	*Fundamentals of Selling*

Developing Core	Student Learning Activities	References
A good salesperson handles and presents merchandise so that it is more appealing.	Outline a demonstration of a product, and have the students role play selling this product using the teletrainer. Arrange a visit to a factory or wholesale house which makes or sells the product that the students are trying to sell. Have the students complete an evaluation form regarding the information learned about the product while at the factory. Allow the students to take a survey of the opinions the class has about a product they intend to sell, including previous experiences, and satisfaction or dissatisfaction. Three customers should be asked why they like a particular product they bought. Ask the students to send for, or ask a store for, literature on an item they are selling or considering. While in a department store, have the students watch other sales people, as they try to sell their merchandise, and evaluate these salespeople by checking off items on an evaluation sheet.	

Developing Core	Student Learning Activities	References
	Have the students bring to class an article from a popular magazine that contains good product information. (Does the article make you want to buy it?) Have the class evaluate the information and select the best one. Have the students participate in one method of selling using the information obtained about the product. Methods include the following: . Door-to-door . Personal . Telephone	

OBJECTIVE:

. Utilize principles of display composition and packaging by decorating a showcase or display area.

PROCESS: Promotion.

CAREERS: Package Designer.

Developing Core	*Student Learning Activities*	*References*
Displaying merchandise attractively, emphasizing its versatility at the point of the sale, will enhance the product's salability.	Have the students research and discuss the sales-related occupations in the area of promotion: display, advertising, and packaging.	
	Assign the LAP on Display.	Available from supervisor
	Have the students prepare scrapbooks on principles of good display composition.	*Display Fundamentals*
	Discuss principles of effective packaging, and have the students design and attractively decorate a showcase, emphasizing the versatility of the product.	
	Allow the students to design an attractive cover for a package, and have them work together to draw a floor plan showing areas which would be available for sport advertisements.	*Fundamentals of Selling*

Developing Core	*Student Learning Activities*	*References*
	Have the students design a display for each of the following areas for a product to be sold in the retail outlet: window, showcase, and sales floor display. Prices and descriptive signs may be displayed on fixtures, backdrops, and on the floor for all products.	*Retail Selling is Fun*

OBJECTIVE:

. The student will consult with the assistant buyer before authorizing an order of merchandise, and be able to price that merchandise according to data from market research.

PROCESS: Purchasing.

CAREERS: Pricing Clerk, Buyer.

Developing Core	*Student Learning Activities*	*References*
Choosing the amount and kind of merchandise which is in demand is vital to a retailing outlet in order to make profits.	Have the students authorize payment of invoices for merchandise received. Discuss factors to be considered when pricing merchandise. Have the students price merchandise for resale after analyzing data compiled on potential products, and report on how merchandise is selling. Staff meetings, including selling personnel, should be held before introducing new merchandise. Ask the students to work out appropriate introductory campaigns when new merchandise is introduced.	*Fundamentals of Selling*, page 228

OBJECTIVE:

. The student will be able to list personal characteristics that a successful salesman should possess, and explain why each is important.

PROCESS: Self Development.

CAREERS: Cashier-Checker, Salesperson.

Developing Core	*Student Learning Activities*	*References*
A salesman's personality plays an important part in the selling of a product.	Have the students research and discuss the sales-related occupations and their various responsibilities and duties: stock clerk, cashier-checker, and salesperson.	Science Research Associates, Inc.
	Show a film on personal characteristics of a salesperson.	"Goodwill Ambassadors," SM 421.2, 10 min., color
	Discuss four broad areas in which a salesperson should possess strong traits: . physical . character . mental . social	*Fundamentals of Selling*
	Administer a physical check list and give the students a score.	
	Discuss five mental traits which are important: . accuracy . alertness . general information . initiative . knowledge of one's work	

Developing Core	Student Learning Activities	References

Have the students role play (in groups of five) a salesperson selling a product to a customer, each taking a turn playing the salesman and customer while the other three evaluate the salesman's application of successful personality traits.

Discuss each trait and explain why it is important.

Play a tape recording of a salesperson dealing with a customer. Note how his personality plays a part in making the sale.

Discuss the social traits that are noticed in the tape recording. What does each mean?

- speech
- tact
- courtesy
- tolerance
- sympathy
- cooperation

Three character traits are important and should be included in the discussion:

- responsibility
- loyalty
- industriousness

Developing Core	*Student Learning Activities*	*References*
	Have the students complete their check list for mental, social, and character traits, and add their scores.	Personal evaluation
	Have each student make a personal portrait, including the following: . Snapshot . Name and age . School; teacher; grade . Color of eyes; hair . Hobbies; sports; studies . Future plans	
	Have the students illustrate the personal characteristics of a successful salesman, using the following: . A notebook or scrapbook . Poster . Bulletin Board . Cartoons . Video tape unit	

OBJECTIVE:

. Given a series of sales documents, the student will be able to add and check all amounts with 100 percent accuracy.

PROCESS: Selling.

CAREERS: Cashier, Salesperson.

Developing Core	*Student Learning Activities*	*References*
When a salesperson writes out a sales check, he is performing one of the most important procedures in store operation and control.	Discuss two reasons why a sales check is important to a store. Display a copy of a sales check and explain why each item of information is necessary. Discuss reasons why: 1. A sales check must be used in sequence. 2. Each one must be accounted for. 3. A sales check must never be destroyed. Ask the students to be aware, when on a shopping trip, of any errors the salespeople make in getting the name and address of the customer. Have them report to the class the things that were noted on the shopping trip. Have the students bring to class a voided copy of a sales check, which can be mounted and displayed for comparison.	See appendix, page 76

OBJECTIVE:

. Given the amount of a sale, and the amount received, the student will be able to make change using the correct procedure.

PROCESS: Making Change.

CAREERS: Salesperson, Cashier.

Developing Core	*Student Learning Activities*	*References*
Accuracy in using the cash register and making change helps to bring in new customers and keep old ones.	Give a demonstration of the parts of the cash register, and how these parts are used.	
Keeping money in an orderly fashion will aid in making correct change.	Allow the students to examine a chart which shows the compartments in a cash drawer and how the coins and bills are placed in this drawer.	Teacher prepared
Developing a good procedure for making change will help to avoid embarrassment resulting from giving incorrect change.	Demonstrate the steps for making change. (Video tape can be utilized): . State the amount of the sale and the amount the customer gave the salesperson. . Place the money received on the change plate. . Ring the sale. . Check the cash register signals. . Place the receipt on the change plate.	

Developing Core	*Student Learning Activities*	*References*
	. Count the change to yourself. . Place the customer's money in the cash drawer, and close it. . Count the change back to the customer.	
	Allow the students to practice using these techniques on a cash register.	
	Given several sales transactions, have the students compute tax using a tax chart.	
Using realistic receipts will add interest to the work.	Have the students bring to class several cash register receipts from family purchases. Compare and tabulate the information on the receipts.	
	While on a shopping trip ask the students to watch the cash register procedure, and note the steps used by the salesperson.	
	Have the students verify totals against cash on hand at the end of the day by using a daily balance envelope.	

OBJECTIVE:

. The student will be able to supervise the flow of work and activity within the merchandising area by taking charge of all equipment and materials used by or for the employees.

PROCESS: Management.

CAREERS: Manager.

Developing Core	*Student Learning Activities*	*References*
Promoting efficiency is the responsibility of the manager.	Have the students distribute and collect all equipment and materials used by and for the employees, and assist in any area where the work force is lax or in need of help. Allow the students to coordinate the retailing activity. Have them: . Set up and equip retail stations. . Receive and direct customers. . Supervise and assist in the ordering and receiving of goods. Assign a LAP from the following list: . Market researching . Buying . Pricing . Advertising . Displaying . Selling	Teacher prepared

Developing Core	*Student Learning Activities*	*References*

After completing the LAP, have them do the following:

- Conduct a market survey.
- Tally results.
- Visit a wholesaler (to purchase raw materials).
- Construct, advertise, and display products.
- Conduct selling activity.

Possible products might include:

Candy
Christmas ornaments
Jewelry -- rings, earrings, necklaces
Candles or candle holders
Fantasy film flowers
Flower vases
Cords
Posters
Table decorations
Placemats
Macramé belts or bracelets
Crocheted handbags
Umbrella holders
Pencil holders
Paper weights
Wall hangings

APPENDIX

TYPEWRITER TEST

1. Which of the following keys are known as the "Home-Row" keys?

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

1 2 3 4 5 6 7 8 9 . , ; $ ' - ! ( ) @ *

_____ _____

_____ _____

_____ _____

_____ _____

2. Using the illustration of a typewriter, identify the following operative parts:

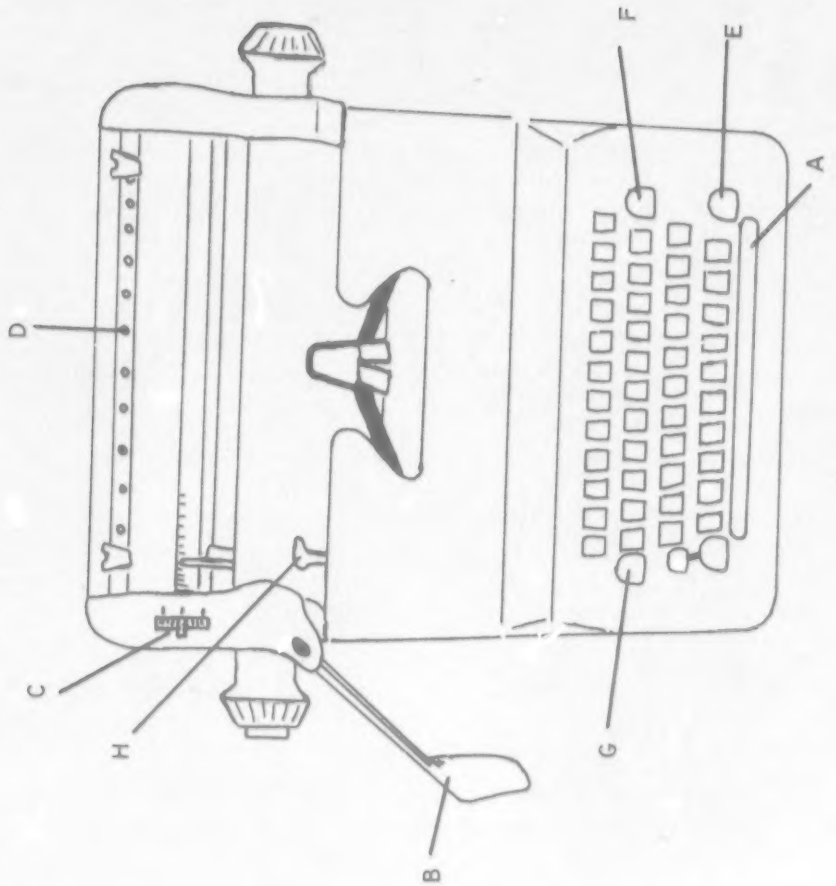
Space bar	_____	Shift key	_____
Return lever	_____	Marginal release	_____
Line spacer	_____	Backspacer	_____
Marginal stops	_____	Ribbon reverse	_____

3. Compose and type a personal letter of not less than 25 words; compose and type a business letter of not less than 25 words.

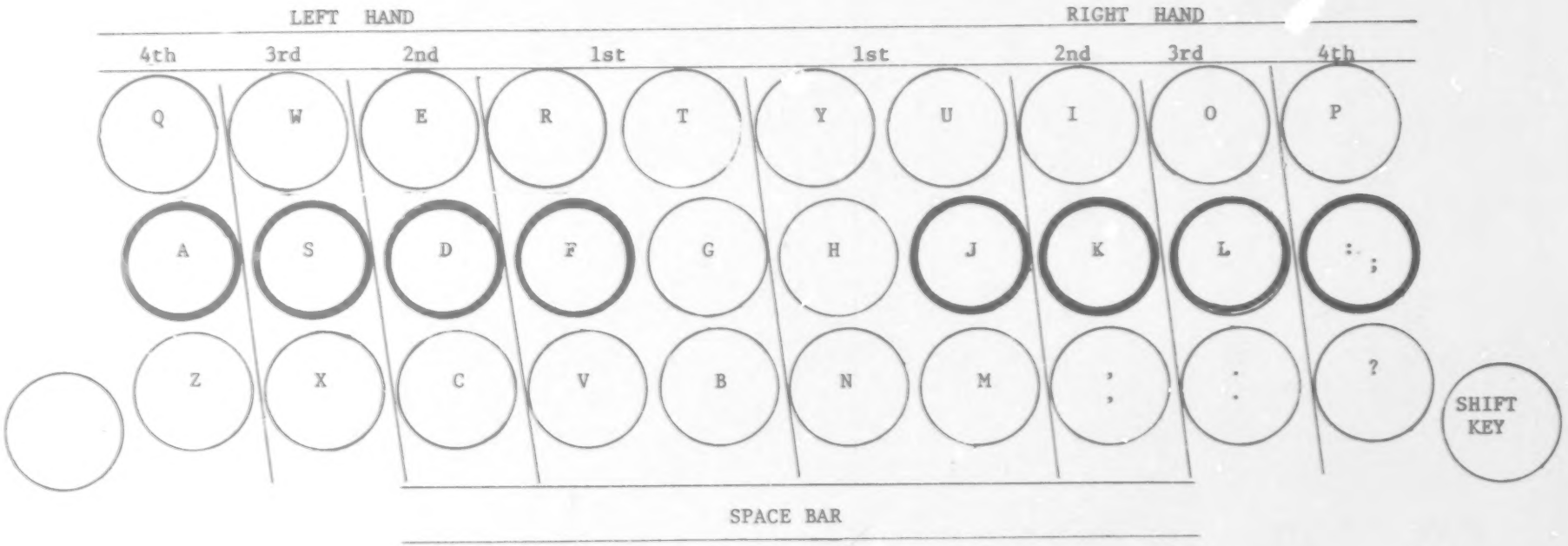
4. Fill out the attached business form using the typewriter.

5. Type or write definitions of the attached business vocabulary.

6. Identify the style of the business letter used.


F
E
A
D
C
H
G
B

Each finger is in charge of several keys as shown by the diagonal lines below. When any finger is not busy striking one of its keys, it returns to its "home" key. "Home" keys are the darker keys.



The following sentences will introduce you to all letters of the alphabet:*

1. Typing is fun.
2. We learn by doing.
3. Quick stroking of each key is important.
4. Being able to just relax is essential.
5. Soon you will acquire a zest for typing.
6. You are all doing very well.

*Fields, Marlin H., Journal of Business Education, April, 1965.

EMPLOYMENT APPLICATION

Employee No. _____
Session _____
Teacher _____

Position Applied For: _____

Name: _____ Home Telephone: _____
(Last) (First) (Middle)

Address: _____
(Number) (Street) (City) (State) (Zip Code)

Sex: M. ____ F. ____ Birth Date: _____ Age: _____

Color of Hair: _____ Eyes: _____ Height: _____ Weight: _____

IN CASE OF AN EMERGENCY, WHOM SHOULD BE NOTIFIED:

Name: _____

Address: _____ Phone: _____

EDUCATION:	NAME OF SCHOOL	LOCATION
Grade School		
High School		

Subjects you like: _____

Subjects you do not like: _____

Activities and Interests: _____

_____

References:

1. Name _____ Position _____
   Address _____ Phone _____
2. Name _____ Position _____
   Address _____ Phone _____
3. Name _____ Position _____
   Address _____ Phone _____

I hereby certify that the above information is correct to the best of my knowledge.

SIGNATURE OF APPLICANT _____ DATE _____

EMPLOYMENT APPLICATION SUPPLEMENT

Employee No. _____
Session _____
Teacher _____

Position Applied For: _____

Name: _____
Last First Middle

Home Telephone: _____

Address: _____
Number Street City State Zip Code

Sex: M. ____ F. ____ Birth Date: _____ Age: _____

Color of Hair: _____ Eyes: _____ Height: _____ Weight: _____

To Printer: Checks are to be printed three to a page; perforations are to be imposed between checks and stubs.

To Binder: Pages are to be bound 30 pages to a book.

No. _____

_____ 19 ___

TO: _____

FOR: _____

Bal. Bro't Forward _____
Amt. Dep. _____
Total _____
This chk. _____
Bal. _____

O. V. T. EXPLORATORY BANK
OF PITTSBURGH

No. _____

_____ 19 ___

PAY TO THE ORDER OF: _____ $ _____

_____ DOLLARS

_____
Branch Office

_____
Authorized Signature

OVT Form F

PAYROLL REGISTER

Division____________________

Teacher____________________ Room Number________________ Session____________________

Employee's Name	For the week of:---------						For the week of:---------						For the week of:---------						For the week of:---------						Total Net Inc.
	Rate	H R	Gross Inc.	Ded.	Net Inc.	Check No.	Rate	H R	Gross Inc.	Ded.	Net Inc.	Check No.	Rate	H R	Gross Inc.	Ded.	Net Inc.	Check No.	Rate	H R	Gross Inc.	Ded.	Net Inc.	Check No.	
TOTALS																									

RECOMMENDED GUIDELINES FOR PAY

Worker Gets Paid For:

1. Actual time spent on mass production for retail activity.

2. Actual time spent on specialized training which does not produce a personal take-home product, i.e., Building Trades, Drafting, etc.

(Worker Does Not Get Paid for any Activity Which Produces a Personal Take-Home Product.)

It is suggested that employees involved in managerial positions be paid $.25 per hour, and that those employees under their supervision be paid slightly less, i.e., $.20 per hour.

In order that the prices of the goods be realistic, these pay rates must be low. If the student earns a large amount, then the student's buying power will exceed the supply of goods.

OVT EXPLORATORY SALES CHECK

Clerk	Location	Date	Sales No.

Customer: _____

Quantity	*Description*	*Price*	
		$	

	SUB-TOTAL	$	
	TAX		
	TOTAL	$	

_____
Customer Signature

UNIT I - CLOTHING AND TEXTILES

General Objectives

In order to explore the learning activities related to the following Processes and Careers,

Processes	*Careers*
Textile Research	Tester Dyer
Construction	Seamstress Goods Inspector Garment Cutter Sewing Machine Operator Alteration Tailor Clothing Repair Specialist Hand Finisher
Hand Stitchery	Home Art Designer Appliquer Hand Knitter Hand Crocheter Weaver Macramé Artist
Alteration	Alteration Seamstress Tailor
Maintenance	Researcher Hand Laundryman Counter Worker Hand Presser

The student will be able to:

- Identify a vocational career interests related to the clothing and textiles industry.
- Construct garments for public dissemination to improve his self image and pride in work.
- Perform selected physical and chemical tests on fabrics to classify their origins, and identify at least two distinguishing characteristics.
- Determine pattern sizes by selecting a pattern and appropriate fabric.
- Perform pattern and fabric preparation by laying out, cutting, and transferring details utilizing a pattern guidesheet.
- Operate a sewing machine in conjuction with a construction process.
- Identify and perform necessary alterations in the construction of a garment.
- Use appropriate finishing processes by selecting and applying those required in completing a construction task.
- Design a textile product by applying good design principles to a hand-stitchery product.
- Utilize hand or needlework techniques by constructing needlework samples.
- Solve a fitting problem by performing selected alterations.
- Select appropriate laundry aids by comparing their cost and utilization.
- List and explain dry-cleaning procedures.
- Perform pre-laundry, laundry, and finishing techniques on stained and soiled garments.

OCCUPATIONAL, VOCATIONAL, AND TECHNICAL EDUCATION

PHASE III

HOME ECONOMICS

OBJECTIVE:

. The student will be able to perform selected physical and chemical tests on fabrics to classify their origins, and identify at least two distinguishing characteristics.

PROCESS: Textile Research.

CAREERS: Tester, Dyer.

Developing Core	*Student Learning Activities*	*References*
Basic research identifies the characteristics and uses of natural and synthetic fibers.	Trace with the students the origins of four natural fibers, and at least three synthetic fibers, by charting the fibers and their source. Indicate the type of source, such as: animal, vegetable, or chemical. Have the students perform at least two of the listed chemical or physical tests on samples of known natural and synthetic fibers. . burning test . iron heat test . effect of chlorine . wet strength test . water absorption Compare effects of common household cleaning agents on natural and synthetic fabrics of known fiber contents. Use the following agents: . chlorine bleach . oxygen bleach . ammonia . peroxide . hot water	*Homemaking for Teen-Agers*, pages 178-252 *Textiles for Home and People*, pages 2-163

Developing Core	Student Learning Activities	References
	Compare cross sections of selected white natural and synthetic fibers under a microscope. Thread a warp of filling thread through a small piece of cork. Cut a thin section of cork, and examine the cross section under the microscope.	
	Have the students diagram the cross section of each fiber.	
	Compare various cross sections, and formulate generalizations on how the individual fibers can be packed together in threads or fabric.	
	Compare dyeability of fabrics of known fabric content by using the same fabrics used in the wet strength test and submerging a two-inch square sample in a solution of dye. Use the type available in grocery stores.	
	Compare the depth and vividness of color and formulate generalizations.	
	Have the students tie-dye items made in class.	
	Discuss careers related to fabric and color research.	

OBJECTIVE:

. The student will be able to determine pattern sizes by selecting patterns and appropriate sized pieces of fabric.

PROCESS: Garment Construction.

CAREERS: Seamstress, Tailor.

Development Core	Student Learning Activities	References
Begin garment construction by giving careful consideration to pattern and fabric selections.	Demonstrate proper measuring techniques. Working in pairs, have students take and record each other's measurements. Use appropriate audio-visual materials. Use the flannel board to demonstrate line and design as related to pattern selection. Have the students select an easy-to-sew pattern by consulting the envelope for fabric type and amount received. Assign the LAP* "Getting Ready to Sew."	*Teen Guide to Homemaking*, page 335 *Teen Horizons at Home and School*, pages 200-209 *Textiles for Homes and People*, pages 174-192

*Learning Activity Packages, with specific activities for students, are available from your supervisor. These packages are constantly updated to include the latest developments.

OBJECTIVE:

. The student will be able to perform pattern and fabric preparation by laying out, cutting, and transferring details utilizing a pattern guidesheet.

PROCESS: Construction.

CAREERS: Goods Inspector, Garment Cutter, Seamstress, Tailor.

Developing Core	*Student Learning Activities*	*References*
The guidesheet is a good map to carry you along the road of successful construction.	Use appropriate audio-visual materials. Have the students analyze fabric and check the bolt label to determine necessary preparation. Have each student compare pattern measurements with his own measurements and alter the pattern accordingly. Demonstrate use of a guidesheet to identify pattern peices and layout a diagram. (pin and inspect) Have the students work in small committees to develop a bulletin board depicting pattern language and utilization. Demonstrate techniques for transferring pattern details and cutting. Have the students cut fabric and transfer pattern details as outlined in the guidesheet.	*Teen Guide to Homemaking*, pages 331-344 *Homemaking for Teen-Agers*, pages 254-345 *Clothes: Part of Your World*, pages 153-171

OBJECTIVE:

. The student will be able to operate a sewing machine in conjunction with a construction process.

PROCESS: Construction.

CAREERS: Sewing Machine Operator, Seamstress, Tailor.

Developing Core	*Student Learning Activities*	*References*
Manipulative skills and safe control of the machine are increased if one has positive initial instruction and the opportunity to practice.	Assign the LAP on the operation of a sewing machine. Demonstrate safe, skillful machine use. Have the students study the sewing machine instruction booklet. Display a wall chart on threading diagrams. Allow the students to practice stitching to gain skill and control. Have them follow a guidesheet and perform stitching required in the construction process.	*Clothes: Part of Your World*, pages 59-63 *Teen Guide to Homemaking*, pages 345-358

OBJECTIVE:

. The student will be able to identify and perform necessary alterations in the construction of a garment.

PROCESS: Construction.

CAREERS: Seamstress, Tailor, Clothing Repair Specialist.

Developing Core	*Student Learning Activities*	*References*
A garment should feel comfortable and have enough room to permit movement without causing strain or unsightly wrinkles.	Have the students develop a list of points to consider in judging the fit of particular garments under construction. Compile these ideas and develop a standard score card for evaluating garment fit. Working in pairs, have students try on garments and score each other on proper fit. Supply the students with information or a list of reference materials on correction techniques, and have them make the necessary alterations.	*Clothes: Part of Your World*, pages 231-243

OBJECTIVE:

- The student will be able to use appropriate finishing processes by selecting and applying those required in completing a construction task.

PROCESS: Construction.

CAREERS: Hand Finisher, Goods Inspector, Sewing Machine Operator, Seamstress, Tailor

Developing Core	*Student Learning Activities*	*References*
Finishing techniques contribute to both the functional and esthetic qualities of the garment.	Have the students use the pattern guide sheet and creative individual ideas to determine what finishing techniques to employ. Use films, filmstrips, or transparencies relevant to this topic. Instruct the students to consult "how to" references for additional information. Have the students complete the finishing techniques on a garment. Discuss possible careers the students might pursue, and refer them to various supplementary materials.	*Textiles for Homes and People*, pages 469-474 *Teen Horizons at Home and School*, pages 196-227

OBJECTIVE:

. The student will be able to design a textile product by applying good design principles to a hand-stitchery product.

PROCESS: Hand Stitchery.

CAREERS: Home Art Designer, Appliquer, Hand Knitter, Hand Crocheter, Weaver.

Developing Core	*Student Learning Activities*	*References*
Hand stichery is an ideal outlet for creativity.	Have the students plan a feasible design using at least two of the principles of design. Have the students list the supplies, tools, and equipment necessary for making a textile product. Allow the students to execute the design using the appropriate supplies, tools and equipment. The finished product can be evaluated by comparing it with the original.	*Teen Horizons at Home and School*, pages 156-182

OBJECTIVE:

. The student will be able to utilize hand or needlework techniques by constructing needlework samples.

PROCESS: Hand Stitchery.

CAREERS: Appliquer, Hand Crocheter, Hand Knitter, Macramé Artist, Weaver, Home Art Designer.

Developing Core	*Student Learning Activities*	*References*
There is a world of hand crafts to be explored, developed and enjoyed either avocationally or vocationally.	Have the students become familiar with some of the many hand stitchery techniques by reviewing stitchery and crafts references and practicing some of the illustrated methods. Arrange a hand stitchery exhibit. Match hand stitchery technique tags with sample products on display. Have a craft specialist give the class a demonstration of one or more techniques.	*Technique of Weaving* *Teen Horizons at Home and School*, pages 196-227

OBJECTIVE:

. The student will be able to solve a fitting problem by performing selected alterations.

PROCESS: Alteration.

CAREERS: Seamstress, Alteration Tailor.

Developing Core	*Student Learning Activities*	*References*
Clothing which does not fit well is uncomfortable and has unsightly wrinkles in areas of stress. If this piece of clothing is altered the wardrobe can have extended use.	Have the students bring a garment from home to be altered. Have the students do the following: . Try on the garment and identify the problem. . Check reference materials to determine the solution. . Practice any unfamiliar techniques. . Perform the alteration.	*Teen Horizons at Home and School*, pages 228-241 *Introductory Homemaking*, pages 349-368 *Teen Guide to Homemaking*, pages 295-308

OBJECTIVE:

. The student will be able to select appropriate laundry aides by comparing their cost and utilization.

PROCESS: Clothes Maintenance. CAREERS: Researcher, Hand Laundryman.

Developing Core	*Student Learning Activities*	*References*
Many laundry aides are available to the consumer. They are useful only when one knows how, when, where, and why to utilize them.	Arrange a classroom exhibit of laundry aides. Discuss and define related laundry-aide terminology. Ask the students to visit a supermarket and classify laundry aides by function, noting price differences among products of equal quantities. Have the students conduct the following experiments: . Compare suds levels. . Study combination reactions. . Determine functions. Arrange for a speaker from the local water treatment facility. Discuss various related career possibilities.	*Introductory Homemaking*, pages 358-362 *Teen Horizons at Home and School*, pages 233-235

OBJECTIVE:

. The student will be able to list and explain dry cleaning procedures.

PROCESS: Clothes Maintenance.

CAREERS: Counter Worker (cleaning; laundry), Hand Presser, Hand Laundryman.

Developing Core	*Student Learning Activities*	*References*
Dry cleaning extends the life of certain types of garments.	Have the students research and identify fibers which must be dry cleaned. Discuss procedures and results of professional dry cleaners and coin operated cleaning establishments. Arrange a visit to a laundry, cleaning, and pressing facility. Have the students differentiate between cleaning and laundry procedures.	*Clothes: Part of Your World*, pages 131-145

OBJECTIVE:

. The student will be able to perform pre-laundry, laundry, and finishing techniques on stained and soiled garments.

PROCESS: Clothes Maintenance.

CAREERS: Hand Laundry Man, Hand Presser.

Developing Core	*Student Learning Activities*	*References*
Prompt pre-laundry attention, considering fiber content as well as type of cleaning agent and cleaning method to be used, will facilitate stain and spot removal.	Use a set of stained fabric swatches, and have students determine the type of stain, type of fabric, and recommended fabric care. Cross check these determinations against a corresponding file of swatch hang tags. Display stain removal charts.	*Teen Horizons at Home and School*, page 234 *Homemaking for Teen-Agers*, pages 242-248
Laundry procedures are dependent upon fabric content and finish.	Have the students develop a home spot and stain removal kit, and collect and study hang tags in relation to fabric content and laundry procedures. Demonstrate permanent press laundry techniques, and give a practical laundry test.	
Pressing and ironing employ the same equipment. However, the techniques vary.	Arrange an exhibit of ironing and pressing equipment, and give a demonstration of techniques.	

Developing Core	Student Learning Activities	References
	Have the students perform related tasks. Discuss with the students their individual career interests, and refer them to career resource materials.	

UNIT II - FOODS AND NUTRITION

General Objectives

In order to explore the learning activities related to the following Processes and Careers,

Processes	*Careers*
Food Preparation	Pantryman/Girl Cook Short Order Cook Baker Kitchen Helper
Food Service	Counter Worker Waiter/Waitress Host/Hostess Bus Boy/Girl Dining Room Helper
Safety Sanitation	All Food Service and Preparation Careers
Meal Planning	All Food Service Careers
Management	Food Service Supervisor Chef Dietition Restaurant Manager Chain Executive

The student will be able to:

- Identify and demonstrate standardized measuring techniques and equipment.
- Use properly a variety of kitchen tools and utensils.
- Define basic food vocabulary terms.
- Produce food items with sensory appeal from recipes.
- Demonstrate an awareness of ethnic food customs by participating in a food fair.
- Plan and prepare food in large quantity by simulating a club refreshment committee.
- Plan and execute specialty meal procedures.
- Utilize to best advantage time, money, energy, equipment and nutritional knowledge in planning and preparing a family meal.
- Demonstrate techniques of salesmanship in promoting the menu.
- Write an order, perform simple mathematical processes needed to add food checks, compute taxes, and make change.
- Perform sanitary and efficient serving processes.
- Apply safety practices to all assigned tasks.
- Identify and classify food items in accordance with the basic four food groups.
- Identify the body's minimum daily nutritional requirements by planning one day's meals.
- Determine preferences and quantities of food prepared or purchased.
- Schedule work and write job descriptions.
- Train and supervise other job areas.
- Record, report, and evaluate work processes.

OBJECTIVE:

. The student will be able to identify and demonstrate standardized measuring techniques and equipment.

PROCESS: Food Preparation. CAREERS: Pantry Worker, Cook, Short-Order Cook.

Developing Core	*Student Learning Activities*	*References*
One of the first and most important techniques to master in food preparation is exact measuring. *Note:* Abbreviation and symbol answers should be covered with a folded flap. After answering all the questions, the student can lift the flap and correct his answers.	Demonstrate proper measuring techniques. Use charts with measuring devices and terms listed on one side, and their correct abbreviations or symbols opposite. Use a similar chart for proving equivalents. Use appropriate standard spoons or cups. Examples: Prove that: 3 tsp. = 1 tbsp. 2 c. = 1 pt. Assign the LAP on measuring. Arrange a classroom display of standardized measuring equipment, labeling each and designating the use of each. *Note:* Instructions for experiments and proofs can be typed on file cards. Students will select equipment and	*Teen Horizons*, pages 282-300 *First Foods*, pages 79-95 *"Cooking: Measuring"*, 10 min., j-s, SM 473.33

Developing Core	Student Learning Activities	References
	foods from the stock supply table and proceed independently per card instructions.	
	Using recipe files, have the students practice measuring and weighing the ingredients of specific recipes: raw meats, fresh fruits and vegetables, and liquid and dry ingredients.	

OBJECTIVE:

. The student will be able to use a variety of kitchen tools and utensils.

PROCESS: Food Preparation.

CAREERS: Pantry Worker, Cook, Short-Order Cook, Baker.

Developing Core	*Student Learning Activities*	*References*
Small equipment provides an efficient means of processing foods.	Play the kitchen equipment concentration game. Arrange a display of kitchen tools and utensils. Attach free-hanging tags containing the tool name on the front side, and use and care descriptions on the reverse side.	*First Foods*, pages 26-49 *Food Preparation for Hotels Restaurants and Cafeterias*, pages 8-31 *The World of Food*, pages 20-37
The tools of the trade are most helpful to a food handler if he understands how and when to use them.	Prepare a cold vegetable snack platter with California dip, for example: . Carrot coined diagonally . Celery fans or sticks . Radish roses . Cucumber or green pepper wheels	

OBJECTIVE:

. The student will be able to define basic food vocabulary terms.

PROCESS: Food Preparation.

CAREERS: Pantry Worker, Short-Order Cook, Cook, Baker.

Developing Core	*Student Learning Activities*	*References*
Success in following recipes depends upon the food handler's grasp of the trade language.	Have the students create file cards from a dictionary of food terms and processes for permanent classroom use. Play food specialist Bingo, and use a food term crossword puzzle.	*Food Preparation for Hotels, Restaurants, and Cafeterias,* pages 37-66 *Teen Guide to Homemaking,* pages 391-406
A variety of processes can be used to prepare raw foods.	Have the students prepare weiners using each of the following cooking processes: . Roast . Braise . Broil . Pan fry . Deep fry	
The preparation process chosen will directly affect the sensory appeal of the finished product.	Evaluate the results with sensory appeal criteria. *Note:* The use of individual file cards will facilitate additions and corrections while maintaining alphabetical ordering.	

OBJECTIVE:

. The student will be able to produce food items with sensory appeal from recipes.

PROCESS: Food Preparation.

CAREERS: Pantry Worker, Cook, Short-Order Cook, Baker.

Developing Core	Student Learning Activities	References
The ability to read and interpret recipes is necessary for efficient work and a satisfactory results.	Have the students search through a selection of standardized recipes for one not previously prepared that sounds appealing. Place the recipe on a 5" x 8" card, and list necessary equipment and supplies on the reverse side. Have the students prepare the market order and prepare the dish according to the recipe. Evaluate the finished product according to the following criteria: . Appearance . Aroma . Flavor . Temperature	*Elementary Baking* *Betty Crocker's Cookbook* *Teen Guide to Homemaking*, pages 478-513 *The World of Food*, pages 462-501

OBJECTIVE:

. The student will be able to demonstrate an awareness of ethnic food customs by participating in a food fair.

PROCESS: Food Preparation.

CAREERS: Pantry Worker, Cook, Short-Order Cook, Baker.

Developing Core	*Student Learning Activities*	*References*
Each individual has his own "soul" food, and we should be willing to try another's "soul" food.	Conduct a "soul" seminar. Define "soul" and "ethnic." Organize a class as if it were the U.N., dividing the students into delegations. Have each delegation select and prepare authentic food for a U.N. Food Festival. Exchange and sample the various foods. Use audio-visual aids on ethnic foods and customs.	*Teen Guide to Homemaking*, pages 459-477 *First Foods*, pages 181-196 *Food and Your Future*, pages 392-405

OBJECTIVE:

. The student will be able to plan and prepare food in large quantities by simulating a club refreshment committee.

PROCESS: Food Preparation.

CAREERS: Pantry Worker, Cook, Short-Order Cook, Baker.

Developing Core	*Student Learning Activities*	*References*
Many occasions necessitate preparing foods in larger quantities than our usual daily requirements.	Have small groups participate in brainstorming to identify occasions when large-volume cookery techniques are necessary. Simulate a refreshments committee of a large club which may consist of other OVT classes. Have the committee plan refreshments, considering the following: . number to serve . season of year . food preferences . availability and cost of food . division of work responsibility Have the students prepare and serve the refreshments to the other areas. Refer the students to career resources relevant to their expressed interests.	*Food Preparation for Hotels, Restaurants, and Cafeterias*, pages 44-66

OBJECTIVE:

. The student will be able to plan and execute specialty meal procedures.

PROCESS: Food Preparation.

CAREERS: Pantry Worker, Cook, Short-Order Cook, Baker.

Developing Core	*Student Learning Activities*	*References*
Good food is part of the welcome you feel at a friend's house. When food and people get together, there must be planning and preparation.	Use appropriate audio-visual material. Discuss steps in planning a party, and summarize by developing a checklist. Have the students roleplay introductions: boys to girls, young people to adults, friends to parents, and parents to teachers. Hold a party planning contest. Divide the class into teams, and have each team plan a party using the checklist. All plans will be presented to the class for evaluation. Choose the best plan, discuss it, and have the party as planned. Have the students practice extending verbal and written invitations in standard and unique fashions.	*Homemaking for Teen-Agers*, pages 530-536 *First Foods*, pages 181-196 *Teen Guide to Homemaking*, pages 459-477

OBJECTIVE:

. The student will be able to utilize the best advantage time, money, energy, equipment, and nutritional knowledge in planning and preparing a family meal.

PROCESS: Food Preparation.

CAREERS: Pantry Worker, Cook, Short-Order Cook, Baker.

Developing Core	*Student Learning Activities*	*References*
Time, energy, money, equipment, and nutritional knowledge are resources which must be considered in providing family meals with efficiency.	In small groups of four to six, have the students simulate a family group. Age and sex of each member should be determined. Have each group consider its food budget. Using the Basic Four Food Group Charts, have each simulated family plan its meals, computing the cost of each item to determine whether the total is within the food budget. Analyze ways to cut the cost or to add to the meal by spending more for food. Have each group prepare a market order, and list and gather equipment needed to prepare the meal. A work schedule should be developed and incorporated as part of the food preparation. Allow the groups to prepare and serve the meals. Evaluate on the basis of sensory appeal.	*Homemaking for Teen-Agers*, pages 537-541 *Teen Guide to Homemaking*, pages 391-406 *First Foods*, pages 133-148 *Teen Horizons at Home and School*, pages 261-281

OBJECTIVE:

. The student will be able to demonstrate techniques of salesmanship in promoting the menu.

PROCESS: Food Service.

CAREERS: Counter Worker, Waiter, Waitress, Host, Hostess.

Developing Core	*Student Learning Activities*	*References*
Food Service Personnel must be: . familiar with menu terminology . able to describe food appealingly . willing to offer suggestions . ready to take orders . able to ask questions to insure customer satisfaction . aware of approximate food preparation times	Allow the students to become acquainted with menus by reading a variety of authentic menus. Have them compile a list of definitions of all unfamiliar terminology. Using recipes, have the students approximate preparation times for menu entrees. Play the concentration game using cooking and menu terminology, and allow the students to practice describing foods with appetite-tempting adjectives. Give out crossword puzzles relating to cooking or menu terminology. Students may also work a cooking term line-o-gram or play food-specialist Bingo. Refer the students to appropriate references and discuss career opportunities in food preparation.	*Food and Your Future*, pages 309-336 *Food Preparation for Hotels, Restaurants, and Cafeterias*, pages 601-610 *The World of Food*, pages 382-423

OBJECTIVE:

. The student will be able to write an order, perform simple mathematical processes needed to add food checks, compute taxes, and make change.

PROCESS: Food Service.

CAREERS: Waiter, Waitress, Host, Hostess.

Developing Core	*Student Learning Activities*	*References*
Mathematical skills and legible handwriting are two key ingredients for preparing a food check.	Use overhead projector transparencies of guest check preparation. Have the students use menu and guest check booklets to prepare food checks as specified in the hand-out statement problems. Have the students role play food check preparation situations. Discuss possible vocational relationships.	*First Foods*, pages 247-277 *The World of Food*, pages 450-461

OBJECTIVE:

. The student will be able to perform sanitary and efficient serving processes.

PROCESS: Food Service.

CAREERS: Host, Hostess, Waiter, Waitress, Bus Boy, Dining Room Helper.

Developing Core	*Student Learning Activities*	*References*
Meals served to patrons according to established rules of etiquette, and portraying sanitary, efficient, work habits, contribute to customer satisfaction.	Use appropriate audio-visual materials, and overhead transparencies. Using a meal planned from a restaurant menu, and actual table appointments, set a sample individual cover to accommodate the meal. Have the students read and complete exercises in *Training Yourself for Fast Food Service.* Demonstrate how to take and serve an order, and allow the students to role play established rules of serving etiquette. Practice the food serving process from greeting the customer through accepting payment and clearing the table. Discuss individual interests and related careers.	"How to be a Successful Hostess" SM3 480 "The Waitress" 34 fr. "Tables, Modes and Manners" F.S. Melamine, 35 min., 55 fr., color *Teen Horizons at Home and School,* pages 354-367

OBJECTIVE:

. The student will be able to apply safety practices to all assigned tasks.

PROCESS: Safety.

CAREERS: All Food Service and Preparation Careers.

Developing Core	*Student Learning Activities*	*References*
Accidents do not just happen; they are caused. Prime emphasis must be placed on teaching students to prevent injury.	Arrange a "Rise and Care Demonstration" by a utility company representative. Have the students consult a manufacturer's instruction booklet to prepare and perform an appliance care-and-use demonstration.* Use appropriate audio-viual aids. Have the students role play basic safety procedures to become familiar with use and location of fire blankets and fire extinguishers, as well as how to plan placement on range surfaces and the use and handling of sharp utensils. Discuss possible careers related to demonstration work, and refer the students to references on the subject.	*Food Preparation for Hotels, Restaurants, and Cafeterias*, pages 32-36

*Arrange to video tape the best presentation.

OBJECTIVE:

. The student will be able to perform sanitation practices applying to himself, his work environment, and consumable foods.

PROCESS: Sanitation.

CAREERS: All Food Service Careers.

Developing Core	*Student Learning Activities*	*References*
Practicing good personal hygiene and sanitary work habits will contribute to safe food for consumption.	Use appropriate audio-visual aids.	"Let's Keep Food Safe to Eat" 11 min., SM 473.66, color
	Develop with the students a personal check list for a well groomed food handler.	"Why Foods Spoil" 14 min., SM2 473.53
	Have the students work in small groups to develop skits which depict good food handling habits: . Wash hands. . Use and dispose of paper tissues. . Keep hands away from hair and face. . Use testing spoon properly. . Dress and groom well. . Abstain from chewing gum and smoking	*Food Preparation for Hotels, Restaurants, and Cafeterias,* pages 8-14
	Perform simple experiments in bacteria and mold growth.	

OBJECTIVE:

. The student will be able to identify and classify food items in accordance with the basic four food groups.

PROCESS: Meal Planning.

CAREERS: All Food Services Careers.

Developing Core	*Student Learning Activities*	*References*
The four basic food groups serve as a guide in grouping foods of similar nutritional values.	Develop collages related to the four basic food groups. . Use Dairy Council food models or cut food pictures from magazines. . Label a poster with each of the four food groups. . Classify and attach pictures to the appropriate posters. Use appropriate audio-visual materials. Discuss related career opportunities.	*First Foods*, pages 55-57 *Teen Horizons at Home and School*, pages 242-260 *Homemaking for Teen-Agers*, pages 493-500

OBJECTIVE:

. The student will be able to identify the body's minimum daily nutritional requirements by planning one day's meals.

PROCESS: Meal Planning. CAREERS: Food Service.

Developing Core	*Student Learning Activities*	*References*
Selecting and substituting foods in the amounts specified in the four basic food groups assures a diet balanced in the essential nutrients.	Discuss the basic four food groups chart. Using food models as flash cards, divide the class into two teams. When shown a card, have each contestant state: the food group, the minimum daily requirement, and a substitute food item from the same group. Have the students plan one day's meals and snacks. Using an authentic A La Carte menu, have the students suggest three well-balanced meals from the menu. Ask the students to collect pictures of colorful combinations of foods served at breakfast, lunch, dinner, and parties. Allow students to evaluate their own day's meal plan.	*First Foods*, pages 96-112, 113-132 *Food and Your Future*, pages 21-36

OBJECTIVE:

. The student will be able to determine preferences and quantities of food prepared or purchased.

PROCESS: Management.

CAREERS: Foods Service Supervisor, Chef, Dietitian

Developing Core	*Student Learning Activities*	*References*
Forecasting food needs prior to their use is an efficient management technique.	List references to aid in writing market orders. Many cook books contain "know your ingredients" or "marketing tips" sections. Have each student collect market orders from all workers under his supervision, and compile them on master order forms to be submitted for teacher approval. Allow the students to experiment and determine the measurable content of various sized serving scoops. Display the test results. Have the students test the suggested yields of recipes being utilized in the kitchen, and conduct a food preference survey. Direct the students to related career references.	*Occupations and Careers*, pages 25, 86, 129, 248-249.

OBJECTIVE:

. The student will be able to schedule work and write job descriptions.

PROCESS: Management.

CAREERS: Dietitian, Supervisor, Food Service Chef.

Developing Core	*Student Learning Activities*	*References*
Delegation of duties includes identifying the work to be done and dividing it into segments with all efforts concentrated toward efficient organization of work schedules.	Arrange for a Dietitian or Food Service Supervisor to discuss organization of work schedules. Have the students assign work one week in advance by means of a job distribution sheet and submit it for teacher approval. Have each student refer to the D.O.T. and write a job description for each worker under his supervision.	*The World of Food*, pages 450-461

OBJECTIVE:

. The student will be able to train and supervise other job areas.

PROCESS: Management.

CAREERS: Food Service Supervisor, Chef, Dietitian.

Developing Core	*Student Learning Activities*	*References*
Management is the utilization of people, not the direction of things. A good manager should bear in mind his purpose when dealing with problems such as: . absenteeism . training new help . tardiness . discourtesy . pilferage . inefficiency . carelessness . laziness . breakdown of equipment	Have each student train another student in a process he has satisfactorily accomplished. Allow the student to oversee the work of all employees under his supervision. Allow the students to examine case studies (descriptive situation paragraphs) and suggest and defend administrative response to each. Have the students develop a standard procedure for dealing with each type of problem. Arrange a visit to a school cafeteria and note all training and supervising efforts. Discuss appropriate career opportunities.	*Homemaking for Teen-Agers*, pages 711-724

OBJECTIVE:

. The student will be able to record, report, and evaluate work processes.

PROCESS: Management.

CAREERS: Restaurant Manager, Chain Executive, Supervisor, Food Service Chef, Dietitian.

Developing Core	*Student Learning Activities*	*References*
Records, reports, and evaluations are clerical responsibilities which aid management in making wise decisions.	Have the students practice some math problems in computing unit prices, and have them perform the clerical exercises of purchasing: . receiving groceries . recording quantity and description, including computation of unit price . displaying grocery receipt forms . balancing register tape and grocery receipts (Use a recipe being prepared in the food preparation area) Compute the food cost per serving. Using an employee rating chart, have the students evaluate workers under their supervision, and have them use a check list to evaluate themselves as managers.*	*First Foods*, pages 247-276 *Teen Horizons at Home and School*, pages 447-460

*Self evaluation items should be constructed to deal with job performance, human relations, personal attributes, and leadership. Columns to be checked may be labeled as follows: Most of the Time, Frequently, Occasionally, Rarely.

UNIT III - HOME, HEALTH AND COMMUNITY SERVICE

General Objectives

In order to explore the learning activities related to the following Processes and Careers,

Processes	*Careers*
Horticulture Floriculture	Soil Conservationist Landscape Gardener Landscape Architect Florist Horticulturist Gardener
Recycling	Ecologist
Interior Design	Interior Decorator Upholsterer
First Aid	First Aid Attendant
Health Care	Health Education Officer Public Health Nutritionist Public Health Nurse
Nursing	Nurse Nurse's Aide Orderly
Research & Development	Medical Technologist Research Lab Technician Medical Lab Assistant
Good Grooming	Cosmotologist Barber Apprentice Hair Stylist Beautician
Child Care	Child Day Care Center Worker Nurse's Aide Mother's Helper Kindergarten Aide

The student will be able to:

- Prepare horticulture beds and care for plants properly.
- Produce flower arrangements.
- Collect and recycle materials for use in the home.
- Select and apply materials to home beautification.
- Use basic first aid procedures.
- Follow precedures used in a health services area.
- Care for someone who may be ill.
- Use a microscope and perform various tests on organic samples.
- Demonstrate a knowledge of cosmetology.
- Identify skills utilized by a hospital.
- Supervise and care for small children.
- Compile and distribute information on community health agencies and their services.

OBJECTIVE:

. The student will be able to prepare horticulture beds for seeding, and seed and maintain selected plants by fertilizing, watering, weeding, thinning, and transplanting.

PROCESS: Horticulture.

CAREERS: Soil Conservationist, Landscape Gardener, Landscape Architect.

Developing Core	*Student Learning Activities*	*References*
Plants and shrubbery aid in the beautification of both the home and the community.	Have the students do the following: . Prepare horticulture beds, and maintain plants. . Transplant seedlings to horticulture beds and maintain them.	*Occupations and Careers*, pages 51, 166, 277-279, 345 *Homemaking for Teen-Agers*, pages 378-380 *Flower and Plant Production in the Greenhouse*, pages 77-104
Soil content should be prepared to accommodate specific plants.	Analyze soil content for nutrients and composition. Mix fertilizer, lime, peat moss and vermiculite, following manufacturers' specificiations.	

OBJECTIVE:

. The student will be able to prepare synthetic and natural flower arrangements for specific occasions by utilizing a variety of materials.

PROCESSES: Horticulture, Floriculture.

CAREERS: Florist, Horticulturist, Gardener.

Developing Core	*Student Learning Activities*	*References*
Natural and synthetic flowers can be arranged in many ways to add beauty to the home.	Have the students arrange natural and synthetic flowers in various arrangements.	*Flower and Plant Production in the Greenhouse*, pages 125-280
Many items which normally are discarded can be recycled into an appealing item to beautify the home.	Students may make their own flowers using fantasy film, tissue paper, or crepe paper.	*Landscape for Living*, U.S. Department of Agriculture, 1972
Flowers can be used to express a person's feelings.	Coffee or soup cans may be brought from home and covered with fabric or contact paper for use as vases for their flower arrangements.	*A Good Life for More People*, U.S. Department of Agriculture, 1971
	Flowers may be made by sewing scraps of material together. These can be made into a pleasing arrangement. Have the students construct flower arrangements for specific occasions such as an anniversary, engagement, prom, birthday, or wedding.	*Modern Lesson Plans in Environmental Science*, pages 79-84

OBJECTIVE:

. Given an interior or exterior design problem, the student will be able to collect and apply reusable materials to enhance the home or community environment.

PROCESS: Recycling.

CAREERS: Ecologist.

Developing Core	*Student Learning Activities*	*References*
Many attractive items can be made from common cans and bottles.	Allow the students to choose a design and recycle a product into a usable item. Some examples are: 1. Bottles may be painted, tissue-paper glued, and shellacked into candle holders or vases. 2. Styrofoam egg cartons may be tied together with ribbon or yarn to make a wastebasket or curler caddy. 3. Coffee cans may be stacked and painted or covered with contact paper to make an umbrella stand. 4. Soup cans may be covered with fabric and used as pencil holders or vases.	*Modern Lesson Plans in Environmental Science*, pages 139-142

OBJECTIVE:

. Given an interior decorating problem, the student will be able to select and apply materials and processes with 75 to 100 percent accuracy.

PROCESS: Interior Design.

CAREERS: Interior Decorator, Upholsterer.

Developing Core	*Student Learning Activities*	*References*
Learning the correct process and finishing technique is essential in refinishing furniture.	Work with the students as they remodel or refinish a piece of furniture. Have the students choose an item to make to beautify their home, such as a large pillow (applique a design or do hand stitchery); a throw pillow (embroidered or appliqued); or a cloth yardstick holder. Ask the students to bring in pictures of home interiors they consider beautiful, and discuss the pictures in class emphasizing differences in taste and perception among individuals. Have the students list principles of design general enough to apply to any type of room design or style of furnishings.	*Homemaking for Teen-Agers*, pages 381-447 *Introductory Homemaking*, pages 213-233

OBJECTIVE:

. The student will be able to use basic first aid procedures such as taking temperature, blood pressure, pulse, and respiration rate, and caring for and dressing wounds.

PROCESS: First Aid.

CAREERS: First Aid Attendant.

Developing Core	*Student Learning Activities*	*References*
There are two things to do about all emergencies: first, prevent them from happening, if possible; second, know how to deal with them effectively.	Discuss preventive measures and have the students role play first aid techniques for the following: 1. Water safety: swimming and boating. 2. Ice: falls while walking; ice skating. 3. Fires and burns. 4. Severe bleeding. 5. Internal poisoning. 6. Shock. 7. Injuries to bones.	*Teen Horizons at Home and School*, pages 420-434 *The Developing Child*, pages 435-460
Delays in an emergency may cause severe injury; react quickly with a sure knowledge of what to do.	Discuss what to do for: . clothes on fire . electric shock . drowning . choking . nose bleed	

Developing Core	Student Learning Activities	References
	Have the students demonstrate and apply properly the following: . roller bandage . sterile gauze dressing . triangular bandage . cravat bandage	
Knowing where to call and having the correct number available may save a life. When a person is injured, keep calm and use the correct first aid treatment. An accurate record of an accident is essential for later use.	List on the chalkboard or flannel board and discuss the following: Which items should be in the first aid kit for the home; for the family car; and for a camping trip? Which telephone numbers should be posted near the home telephone? (police, fire department, doctor, poison control center, "help" agencies) What are the hazards to your children in the home? Complete the programmed learning course on first aid. Authorized instructors can certify students with a badge and card from the Red Cross. Have the students set up a first aid station for minor injuries, and practice completing an accident report form.	

OBJECTIVE:

. The student will be able to direct others in the proper procedures that are to be followed in the health services area, as well as record legibly the needed information on the health treatment form.

PROCESS: Recording and Filing.

CAREERS: Medical Clerk, Medical Receptionist, Medical Records Librarian.

Developing Core	*Student Learning Activities*	*References*
Accurately recording, compiling, coding, and filing medical information, and keeping it up to date, assures proper medical care.	Have the students practice the following procedures used by a medical receptionist: 1. Greet patients. 2. Make patients comfortable in the waiting room. 3. Record basic information and personal data of the patient. 4. Direct patients to the proper area. 5. Transfer records to the medical record librarian. 6. Establish a working relationship with the medical records librarian to insure accuracy and efficiency of health records.	*Clerical Office Procedures*, pages 182-229
	Have the students practice the following procedures used by a medical records librarian: 1. Receive health forms from the medical receptionist. 2. Review and examine all health forms for neatness and accuracy.	See appendix. *Business Principles and Management*, pages 421-492

Developing Core	Student Learning Activities	References
	3. Compile and maintain medical records and accident reports from the first aid attendant. 4. Contact medical personnel for missing data. 5. Code and file records. 6. Compile a list of previous illnesses and treatments.	

OBJECTIVE:

. The student will be able to demonstrate an ability to care for someone who may be ill.

PROCESS: Nursing.

CAREERS: Nurse, Nurse's Aide, Orderly.

Developing Core	*Student Learning Activities*	*References*
Giving proper treatment to the patient while assuring his comfort is the primary responsibility of the nurse.	Demonstrate and discuss the importance of basic nursing techniques, such as: . taking temperature . taking pulse and respiration . taking blood pressure . examining eyes . taking height and weight measurements	*Family Nursing and Child Care*, pages 9-14
	Organize a health clinic among the students in class.	
	Discuss early symptons of illness and precautions that must be taken.	
	Discuss the general diet, liquid diet, soft diet, and diabetic diet.	
	Have the students plan menus for each of the above diets.	
A desire tc help people is necessary for a nursing career.	Allow the students to practice bed-making procedures for hospital beds.	

Developing Core	Student Learning Activities	References
	Demonstrate how to help a patient to turn over, sit up, wash face and hands, and get out of bed.	
	Discuss the personal and career responsibilities of nursing, and educational requirements.	
	Invite a resource speaker to discuss nursing as a career.	
	Allow the students to assist in the preparation of a patient for blood typing by sterilizing the patient's finger with cotton and alcohol.	
	Use a filmstrip on blood diseases.	
	Arrange to have students checked for sickle-cell trait by a local community organization.	

OBJECTIVE:

. The student will be able to use a microscope, prepare bacteria cultures, sketch and identify bacteria, and perform other chemical and microscopic tests using blood or other organic samples.

PROCESS: Research and Development.

CAREERS: Medical Technologist, Research Laboratory Technician, Medical Lab Assistant.

Developing Core	*Student Learning Activities*	*References*
The microscope enables researchers to detect organisms invisible to the eye.	Demonstrate the use of the microscope. Have the students examine and compare various substances under the microscope, such as sugar; salt; rain, tap, and pond or river water; saliva; and blood.	*Modern Lesson Plans in Environmental Science*, pages 171-212 *Nursing and Child Care*, pages 186-216
Some of the equipment in a laboratory is designed for special study of micro-organisms.	Have the students prepare various slides for observation under the microscope: 1. Blood smear stained with Wright's stain 2. Bacteria from the mouth (scrape off some of the food particles with a toothpick, place on a drop of water, and examine) 3. Bacteria from buttermilk (on a clean slide, place a drop of buttermilk, spread it out, and let it dry; place the slide in alcohol to remove fat particles and to fix bacteria; stain the slide with Wright's stain or methylene blue)	

Developing Core	*Student Learning Activities*	*References*
	4. Bacteria on sauerkraut (place a drop of sauerkraut juice on a clean slide and observe bacteria twisting and turning)	
	Have the students prepare bacteria culture dishes using a gram scale to weigh the correct amount of agar. Use an autoclave or oven to sterilize petri dishes.	
	Make cultures on germs from the following:* . hands . cough or sneeze . money . public drinking fountain . hair	
The correct temperature prevents the bacteria from growing at too rapid or too slow a growth rate.	Incubate culture plates at the proper temperature. (For experiments to be examined the following week, a 35-40° F temperature is best.	
	Perform simple experiments involving food adulteration and compounds.	See appendix.
	Assist in the blood typing of students for blood group and Rh factor by using serums to determine blood type.**	

*It is important that the teacher use safety measures for the students handling contaminated dishes.
**Only the teacher should select students for blood typing.

OBJECTIVE:

. The student will be able to demonstrate a knowledge of grooming cosmetology through utilization of resource persons, field trips, and problem-solving situations.

PROCESS: Good Grooming.

CAREERS: Cosmetologist, Barber Apprentice, Hair Stylist, Beautician.

Developing Core	*Student Learning Activities*	*References*
Personal grooming contributes not only to one's self-image, but also to others' images of you.	Discuss principles of personal hygiene.	*Teen Guide to Homemaking*, pages 59-76
A cosmetologist provides many beauty services for customers.	Have the students develop a daily and weekly beauty program for themselves.	*Teen Horizons at Home and School*, pages 126-143
	Work with the class to prepare a guide to good grooming for teenage boys and girls.	
	Demonstrate the correct procedure for giving a manicure. Use proper tools and supplies and maintain safety and sanitary factors.	
	Have the students list and identify the function of supplies and equipment used in hair care.	
	Demonstrate techniques to achieve various hair styles. Consider hair texture, patron's age, occasion, etc.	

Developing Core	Student Learning Activities	References
	Have the students use different setting lotions on wigs and determine the effects.	
	Have students organize their own beauty shop and provide manicuring services for others.	
	Compare synthetic hair to human hair and list special care techniques for each.	

OBJECTIVE:

. The student will be able to identify specific health skills associated with various departments in a hospital by participating in a six week "hospital exploratory experience."

Developing Core	Student Learning Activities	References
The various health and medical careers in a hospital have different educational requirements.	Distribute parental permission slips for a chest x-ray and hospital experience trip. Determine the students' present knowledge of specific hospital careers. With the cooperation of the hospital, schedule the students in the various departments, such as: . Pediatrics . Pharmacy . Inhalation Therapy . Physical Therapy . Occupational Therapy . Radiology . Medical Records . Central Service . Laboratory Discuss specific and interrelated functions of each department.	See appendix for test. *Homemaking for Teen-Agers*, pages 711-724 *Occupations and Careers*, pages 21, 34, 50, 248, 249, 262, 329, 345

Developing Core	Student Learning Activities	References
	At the beginning or conclusion of each session, have students report on their activities in each department. Discuss job requirements, educational requirements, and problems related to the area. After the above activities, determine the students' knowledge of specific hospital careers, and discuss the experience.	

OBJECTIVE:

. The student will be able to identify developmental tasks for younger children and participate with the children in a nursery or elementary school setting.

PROCESS: Child Care.

CAREERS: Child Day-Care Worker, Nurse's Aide, Kindergarten Aide, Mother's Helper.

Developing Core	*Student Learning Activities*	*References*
For education to be meaningful for the child, he must be involved as a person.	Discuss some of the developmental tasks characteristic of the age of the child each student will be working with. Using this background information, have the students plan some activities which will interest the child such as games which require manipulative skills or telling or reading stories. Have the students plan activities which are exciting as well as educational, such as arranging a fundamental nutrition lesson accompanied by an easy food preparation. Students may act as a teacher's aide in the nursery or elementary school, and perform such tasks as preparing visual aids, monitoring an activity or tutoring an individual student.	*Homemaking for Teen-Agers*, pages 67-121 *The Developing Child* *Family Nursing and Child Care*

Developing Core	Student Learning Activities	References
	Invite speakers from child care centers, state agencies, and the Welfare Department to discuss job opportunities and requirements as well as operational standards.	
	Ask the students to observe pre-schoolers or lower elementary students, analyzing their physical, mental, emotional, and social development.	
	Have the students visit hospitals, day care centers, and pre-schools to compare procedures and training.	
	The operations of a child development center can be explored by identifying some of the developmental tasks for younger children and participating with children in a nursery or elementary school setting.	
	Discuss some things that might happen if a small child is left without supervision.	
	Have the students dramatize an interview with a mother who has asked for someone to care for her child. Include all the things you need to know about the child, the house, the equipment, and emergency phone numbers.	

OBJECTIVE:

. The student will be able to compile and distribute information about available health and community agencies and their specialized services.

PROCESS: Health Care.

CAREERS: Health Education Officer, Public Health Nutritionist, Public Health Nurse.

Developing Core	*Student Learning Activities*	*References*
Almost every community acknowledges a drug abuse problem. Given correct information, young people can become aware of the dangerous effects of drugs.	Discuss the community's problems with drug abuse.	Current newspapers
	Ask the students to bring in newspaper clippings on drug-related arrests and deaths.	
	Display on flannel board the three major categories of drugs and name specific drugs: 1. Amphetamines - stimulants 2. Barbiturates - depressants 3. Hallucinogens - mind benders	Drug Education Lessons, *Drug Abuse as a Social Problem - Grades 7-12*, pages 16-17
	Have a panel discussion on the pros and cons of drug use.	
	Assign research projects on particular drugs and their symptoms.	
	Invite a speaker from the drug information center.	Yellow pages

Developing Core	*Student Learning Activities*	*References*
	Play a bingo game on drug abuse called "Trip or Trap."	Spenco Medical Corp. P. O. Box 8113 Waco, Texas 76710
Cigarette-related diseases can be easily divided into three major categories: lung, cardiovascular, and miscellaneous problems.	Discuss effects of cigarette smoking on health.	Drug Education Lessons
	List various contributing factors to increased cigarette smoking: . Advertisements in newspapers, magazines. . Examples of parents, friends, and celebrities. . Peer approval.	Drug Education Lessons - *Drug Abuse as a Social Problem*, pages 17-18
	Discuss statistics on smoking and health.	
	Demonstrate effects of "tar" and nicotine using the "Mechanical Smoker."	
	Illustrate damage to lungs from smoking by displaying an actual lung specimen.	
	Experiments and projects: 1. Research varying amounts of "tar" and nicotine in cigarettes by using the "Mechanical Smoker" and by comparing various brands with high and low amounts.	

Developing Core	Student Learning Activities	References
	2. Use a tape recorder to do a report on smoking and health (students may wish to do a "radio special" presentation for community affairs).	
Drug abuse also includes "sniffing" substances such as glue and aerosol products.	Discuss how aerosol products are used and for what purposes.	
	Have health officers conduct a survey to find out if students have ever heard of aerosol abuse, if they have tried it, or if their friends have tried it.	
	Show the filmstrip "Rap On" and discuss the problem of aerosol sniffing.	Aerosol Education Bureau 300 East 44th Street New York, N.Y. 10017
	Launch a school campaign against drug abuse by one of the following ways: 1. Students can develop their own anti-drug advertising slogans and display them in class or on silkscreen badges. 2. Conduct a survey on students who have experimented with drugs, glue or aerosol sniffing, smoking, or alcohol.	
	Determine the extent of drug abuse problems in the school and community.	

Developing Core	*Student Learning Activities*	*References*
Various agencies offer numerous services to the community.	Compile a "telephone book" of community health agencies, their specific functions, and local phone numbers. Give class members a duplicated copy.	
	Have students simulate "Board of Health" agents and make visits to departments where food or bacteria are likely to breed. Collect samples on petri dishes and analyze results.* Keep accident records for each area and report to each room its status.	Biology or micro-biology reference book *Teen Guide to Homemaking*, pages 361-374
The human body requires the correct nutrients for growth, energy and repair.	Discuss the effects of food on health.	
Certain foods contain specific nutrients.	Have the students plan a well-balanced menu for a cafeteria, and perform nutritional experiments on white rats or guinea pigs. Keep growth charts and accurate records.	
Food must be processed correctly in order to destroy harmful organisms or preserve nutrients.	List the various methods for preserving foods. Discuss factors which cause food to spoil such as enzymes, molds, and bacteria.	
	Conduct experiments on the chemistry of foods and have students study food package labels for preservatives. Examine such products under the microscope.	

*These activities may be teamed with Foods and Nutrition teacher. Safe handling of contaminated petri dishes must be stressed.

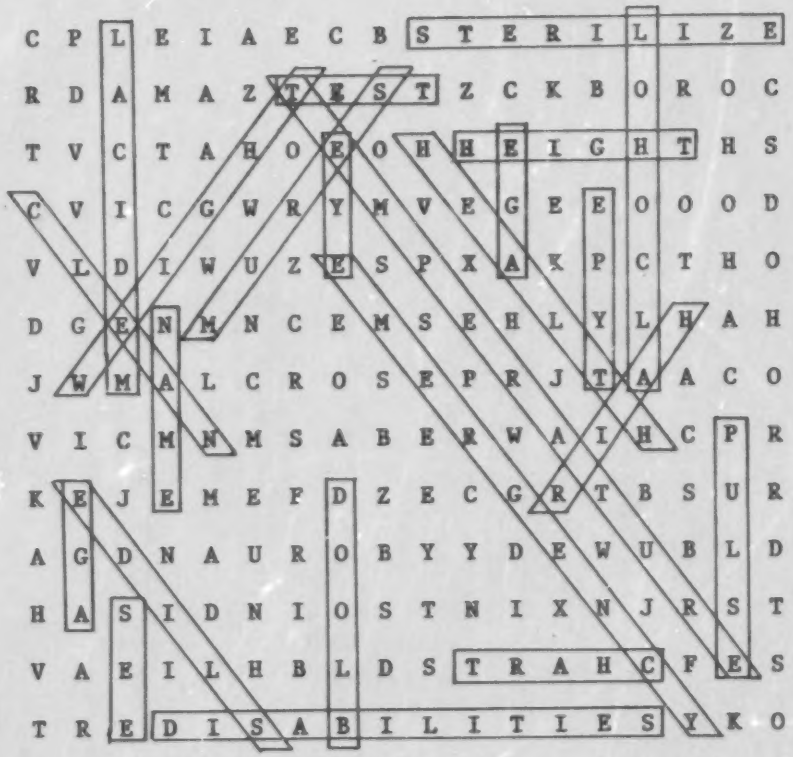
Developing Core	*Student Learning Activities*	*References*
Different organisms spoil different types of foods.	Experiment with the length of time required for various foods to spoil, such as: . bread group -- bread (mold) . milk group -- milk (mold) cheese (bacteria) . meat group -- ground beef (bacteria) . fruit/vegetable group -- apples, oranges (molds and microorganisms) Have the students determine the substances which destroy the foods.	

APPENDIX

COMMUNITY HEALTH AND SERVICES

Directions: This is a puzzle and a message. There are words to find which run in all directions. The subject is Community Health and Services. The left-over letters make up a sentence. See what you can do to find the words and message.

1. Age
2. Alcohol
3. Blood
4. Chart
5. Clean
6. Disabilities
7. Emergency
8. Eye
9. Hair
10. Health
11. Height



12. Medical
13. Pulse
14. Serum
15. Slide
16. Sterilize
17. Temperature
18. Test
19. Type
20. Weight
21. Name
22. See

APPENDIX

MEDICAL HEALTH FORM

Date: _____

Name: _____ Sex: M. ___ F. ___
last first middle

Session: _____

Birth Date: _____ Age: _____

Height: _____ Hair Color: _____ Temperature: _____

Weight: _____ Eye Color: _____ Pulse: _____

Blood Type: _____ Eye Test: L. _____ R. _____

Disabilities: _____

Health History: If you have/had any of the following, place a check in the space below.

Measles _____
Chicken Pox _____
Mumps _____
Allergies _____
Nosebleeds _____
Broken Bones _____
Fainting _____
Other _____

IN CASE OF AN EMERGENCY, WHO SHOULD BE NOTIFIED:

Name: _____ _____ Phone: _____ _____

EXPERIMENTS

MEDICAL LAB TECHNICIANS -- PUBLIC HEALTH NUTRITIONISTS

EXPERIMENT PURPOSE: To conduct a test for starch.
MATERIALS: Iodine, an eye dropper, and samples of:

Potato	Spaghetti	Rice
Apple	Powdered Milk	
Bread	Corn Flake Crumbs	

PROCEDURES: Place a drop or two of iodine on the food sample. Wait a few seconds and check the food sample. If starch is present, a blue-purple-black color will result. Record the results for each food sample on the Lab Experiment Report.

CAUTION! IODINE IS POISONOUS! It is not to be swallowed!

EXPERIMENT PURPOSE: To conduct a test for fat.
MATERIALS: Brown paper bag, lighted light bulb, a spoon and knife for mashing, and samples of:

Cheese	Peanut Butter	Egg White	Wheat Germ
Margarine	Mayonnaise	Egg Yolk	
Lunch Meat	Mustard	Potato Chips	

PROCEDURE: Chop or mash the food sample if necessary. Rub a small sample of the food on a piece of brown paper bag. Heat the paper with the food over a light bulb. If a greasy stain is left on the bag, fat is present. Record the results for each food sample on the Lab Experiment Report.

EXPERIMENT PURPOSE: To conduct a test for protein.
MATERIALS: Candle, matches, feather, and samples of:

Cheese	Sugar	Peanut Butter
Powdered Milk	Turkey	
Mayonnaise	Bread	

PROCEDURES: Using a candle or a match, burn a small feather. The odor you smell is characteristic of protein. Use this test to determine whether protein is present in the food samples. Burn each sample, and if the odor is the same, protein is present. Record the results for each food sample on the Lab Experiment Report.

ERIC

LAB EXPERIMENT REPORT

Name _____

EXPERIMENT I:

FOOD SAMPLE	RESULTING COLOR	IS STARCH PRESENT?

EXPERIMENT II:

FOOD SAMPLE	WHAT IS LEFT ON BROWN PAPER?	IS FAT PRESENT?

EXPERIMENT III:

FOOD SAMPLE	IS ODOR THE SAME?	IS PROTEIN PRESENT?

PROBLEM CUSTOMER SITUATIONS
APPOINTMENT BOOK

Class M T W TH F_ Date _____

Customer _____

Hair Color _____ Type: Natural or Synthetic

Hair set for what style? _____

Treatment Used: Shampoo
Set
Hair Dryer
Conditioner
Hair Setting Lotion
Hair Spray

Size rollers used: Small Medium Large Pin Curls

Diagram how you set this customer's hair.

What problems did you have?

MULTIPLE CHOICE TEST

Directions: Write the best answer in the blanks to complete the following statement:

1. _____ The head of the hospital is the:

   a) Doctor
   b) Director of Nurses
   c) Administrator
   d) Technician

2. _____ The department responsible for the care of the children is called:

   a) Pathology Department
   b) Psychiatric Department
   c) Physical Therapy Department
   d) Pediatrics Department

3. _____ All medicines, needed for patients, are prepared and obtained from the:

   a) Drug Store
   b) Nurse
   c) Pharmacy
   d) Doctor

4. _____ The function of the Inhalation Therapy Department is to treat patients with:

   a) Lung Conditions
   b) Ulcers
   c) Sugar Diabetes
   d) Blood Disorders

5. _____ The Dietary Department prepares:

   a) 1 only
   b) 1 and 2
   c) 1, 2 and 4
   d) all of these

   1. Special Diets
   2. Regular Diets
   3. Food for doctors and nurses
   4. Food for the cafeteria

ERIC

6. _____ The department responsible for obtaining supplies and equipment for the hospital is:

a) Medical Records
b) Administration
c) Central Service
d) Purchasing

7. _____ When exercise and massage is ordered for the patient, this is done in:

a) Occupational Therapy
b) Rehabilitation
c) Physical Therapy
d) Inhalation Therapy

8. _____ Sterilization (the process of destroying bacteria and organisms) of all supplies is the function of the:

a) Operating Room
b) Central Service
c) Janitors on each floor
d) Nurses on each floor

9. _____ If a doctor wants to determine whether a bone is broken, he would send the patient to the:

a) Radiology Department
b) Operating Room
c) Emergency Room
d) Recovery Room

10. _____ The primary purpose of the Rehabilitation Department is to:

a) Get the patient out of bed
b) Prepare the patient for surgery
c) Provide the patient with the return of normal functions as soon as possible
d) Provide recreational activities for the patient

11. _____ When a patient is discharged from the hospital, the charts are kept by the:

a) Nurse
b) Business Office
c) Unit Secretary
d) Medical Records Department

12. _____ A patient can be discharged from the hospital by an order from the:

a) Family
b) Business Office
c) Doctor
d) Administrator

13. _____ Blood samples are obtained and analyzed by the:

a) Pharmacy
b) Doctor
c) Operating room staff
d) Laboratory

14. _____ A patient is admitted to the hospital through the:

a) Nursing Office
b) Medical Records
c) Administrators Office
d) Admissions Office

15. _____ More formal education is required for:

a) Licensed Practical Nurse
b) Registered Nurse
c) Orderly
d) Nurse Aide

MATCHING

Directions: Place the letter from the right column next to the correct statement in the left column.

16. _____ Normal pulse rate of an adult
17. _____ Healthy adults breathe ____ times per minute.
18. _____ Coloring matter of red blood cells
19. _____ Blood disease in which the white blood cells are abnormally formed
20. _____ Type AB blood
21. _____ Hereditary condition in which the blood fails to clot
22. _____ Blood disease due to a deficient amount of hemoglobin

A. Hemophilia
B. Anemia
C. Sickle-cell anemia
D. Hemoglobin
E. Leukemia
F. Seventy-two
G. Arteriosclerosis
H. Hemorrhage
I. Arthritis

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23. _____ Type O blood

24. _____ Inflammation of the joints

25. _____ Considerable loss of blood

J. 16-20

K. 65

L. Leukopenia

M. Universal donor

N. Universal receiver

TRUE - FALSE

Directions: Place a T in the blank if the statement is true, and an F in the blank if the statement is false.

26. _____ If there is no reaction (no coagulation or lumps) to either anti-A or anti-B serum, then the person would have type AB blood.

27. _____ The rank of a nurse in a hospital is determined by the style of her cap.

28. _____ The body develops immunity to disease by producing antibodies.

29. _____ The social service worker directs recreational activities for patients in the hospital.

30. _____ Arteries carry blood away from the heart.

31. _____ The radiologist interprets x-ray pictures and fluoroscopy.

32. _____ The head nurse is responsible for the total nursing care of all hospital or clinic patients.

OCCUPATIONAL, VOCATIONAL, AND TECHNICAL EDUCATION

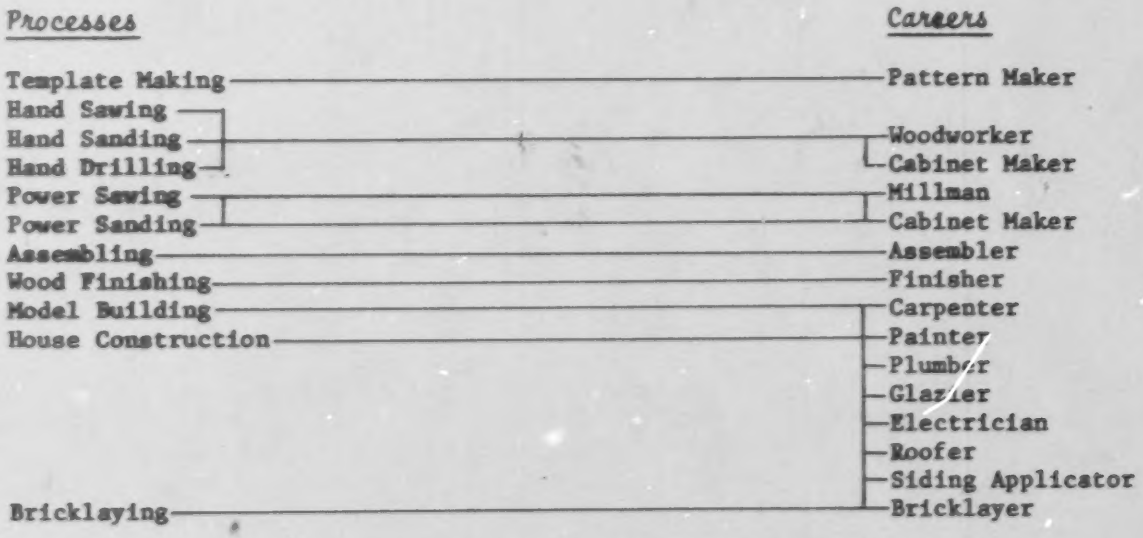
PHASE III

INDUSTRIAL ARTS

UNIT I - CONSTRUCTION

General Objectives

In order to explore the learning activities related to the following Processes and Careers,



The student will be able to:

- List building materials and processes used in the field of construction.
- Develop an avocational interest in construction.
- Identify requirements for specific occupations in construction.
- Develop from an introductory level to a more in-depth level in the processes of construction.
- Demonstrate layout techniques by constructing a template.

- Cut wood with selected hand tools.
- Select and operate the appropriate power tool for cutting given materials.
- Select and use the correct hand drill for a given type of wood.
- Sand a block of wood properly by hand.
- Sand wood using the appropriate machine.
- Assemble a product by selecting and applying the correct fastener.
- Finish a given item by applying stains, varnishes, or other available materials.
- Demonstrate techniques of house construction by erecting a scale model structure, as well as a full-size section of a house.
- Construct a masonry wall using bricklaying materials, tools, and equipment.
- Demonstrate plumbing, glazing, roofing, and siding techniques.

OBJECTIVE:

· The student will be able to demonstrate layout techniques by constructing a template.

PROCESS: Template Making.

CAREERS: Woodworker, Pattern Maker.

Developing Core	Student Learning Activities	References
A layout is a guide or pattern that can be drawn or traced directly on the wood for each part. The layout shows shape and size and location of holes and other openings.	Demonstrate how to make a template.	*Constructing and Manufacturing Wood Products*, pages 117-118
	Use appropriate audio-visual materials.	*Understanding America's Industries*, pages 27-30
	Have the students use books and magazines to secure ideas.	
	The following materials should be used to complete the template: · dividers · compass · ruler · pencil · paper - plain and graph · scissors	
	Use related SRA materials.	School Resource Center
	Have the students select and complete a LAP* on template making.	
	Discuss possible related careers.	

*Learning Activity Packages, with specific activities for students, are available from your supervisor. These packages are constantly updated to include the latest developments.

OBJECTIVE:

- The student will be able to cut wood with selected hand tools.

PROCESS: Hand Sawing.

CAREERS: Woodworker, Cabinet Maker.

Developing Core	*Student Learning Activities*	*References*
Pre-cutting stock eliminates waste and increases production.	Demonstrate hand sawing and pre-cutting.	*Constructing and Manufacturing Wood Products*, pages 128-137
	Use appropriate audio-visual aids.	*Understanding America's Industries*, pages 17-21
	Distribute an information sheet to explain safe operation of the following: • hand saw • coping saw • back saw	
	Have the students cut wood using a hand saw and a back saw.	
	Have the students transfer a design onto a wood surface using carbon paper and a tracing.	
	Have the students cut wood to various shapes using a coping saw.	
	Use related SRA materials.	School Resource Center
	Allow the students to select and participate in a LAP on hand sawing and pre-cutting.	
	Discuss careers involving wood working.	

OBJECTIVE:

· The student will be able to select and operate the appropriate power tool for cutting given materials.

PROCESS: Power Sawing.

CAREERS: Woodworker, Millman.

Developing Core	*Student Learning Activities*	*References*
Cutting wood with a power saw saves time, but safety becomes a major factor in comparison to sawing by hand.	Demonstrate power sawing techniques.	*Constructing and Manufacturing Wood Products*, pages 137-175
	Distribute an information sheet to explain safe operation of the following: · scroll saw · band saw · circular saw · electric hand jig saw · jointer	*General Industry*, pages 170-175
	Use appropriate audio-visual materials.	
	Have the students cut wood using a jointer and a circular saw.	
	Have the students cut wood into various shapes using a scroll saw and a band saw.	
	Use related SRA materials.	School Resource Center
	Allow the students to select and participate in a LAP on power sawing.	
	Discuss requirements for wood-working careers.	

OBJECTIVE:

· The student will be able to select and use the correct hand drill for a given type of wood.

PROCESS: Hand Drilling. CAREERS: Woodworker.

Developing Core	*Student Learning Activities*	*References*
Small holes are drilled to install screws, nails, and small bolts, and they are part of many projects. Holes 3/4 inches or smaller are "drilled."	Demonstrate hand drilling and boring techniques.	*Constructing and Manufacturing Wood Products*, pages 210-232
	Use appropriate audio-visual materials.	*General Industry*, pages 184-188
	Have the students drill holes using an automatic drill and a hand drill.	
"Boring" is cutting a hole 1/4 inches or larger using a bit.	Have the students bore holes using a brace and bit.	
	Use related SRA materials.	Student Resource Center
	Have the students select and participate in a LAP on hand boring.	
	Discuss advantages of one type of drill over another.	

OBJECTIVE:

- The student will be able to sand a block of wood properly by hand.

PROCESS: Hand Sanding.

CAREERS: Woodworker, Cabinet Maker.

Developing Core	*Student Learning Activities*	*References*
Sanding is a way of smoothing the surface of wood with an abrasive--a hard, sharp material that wears away a softer surface.	Demonstrate hand sanding techniques.	*Constructing and Manufacturing Wood Products*, pages 322-327
	Distribute an information sheet on flint sandpaper, garnet sandpaper, and aluminum oxide sandpaper.	*General Industry*, pages 181-183
	Use appropriate audio-visual materials.	
	Have the students sand wood using a block of wood and coarse, medium, and fine sandpaper.	
	Use related SRA materials.	Student Resource Center
	Allow the students to select and participate in a LAP on hand sanding.	
	Discuss types of work in which fine hand sanding techniques are important.	

OBJECTIVE:

- The student will be able to sand wood using the appropriate machine.

PROCESS: Power Sanding

CAREERS: Woodworker, Millman.

Developing Core	Student Learning Activities	References
Belt and disc sanders are the most common machines used for sanding parts that can be attached to the machine.	Demonstrate power sanding techniques emphasizing safety.	*Constructing and Manufacturing Wood Products*, pages 327-334
Portable sanders are excellent for sanding assembled cabinet work.	Use appropriate audio-visual materials.	
	Have the students sand small pieces using a belt sander and a disc sander.	
	Have the students sand larger pieces using the finisher sander.	
	Use related SRA materials.	School Resource Center
	Allow the students to select and participate in a LAP on power sanding.	

OBJECTIVES:

- The student will be able to assemble a product by selecting and applying the correct fastener.

PROCESS: Assembling, Fastening. CAREERS: Assembler.

Developing Core	*Student Learning Activities*	*References*
Projects that are small and made of plywood may not need clamps or glue until assembled.	Demonstrate methods of assembling.	*Constructing and Manufacturing Wood Products*, pages 276-321
Nailing is one of the most common ways of assembling projects. Screws have superior holding power and should be used where strength and ease of disassembling are needed.	Use appropriate audio-visual materials.	*General Industry*, pages 197-207
	Have the students fasten various materials using nails and hammer, screws and screw driver, brace and screw driver bit, and hide, white, or contact glue.	*Occupations and Careers*, pages 321-323, 329
	Use related SRA materials.	School Resource Center
	Allow the students to select and participate in a LAP on assembling.	
	Discuss various products made with each of the techniques listed.	

OBJECTIVE:

- The student will be able to finish a given item by applying stains, varnishes, or other available materials.

PROCESS: Wood Finishing,

CAREERS: Wood Finisher.

Developing Core	*Student Learning Activities*	*References*
Wood finishing processes vary with the kind of wood used and the appearance desired. A good finish will not cover up mistakes.	Demonstrate finishing techniques.	*Constructing and Manufacturing Wood Products*, pages 322-354
	Distribute an information sheet explaining the preparation of wood for finishing: · remove excess glue. · check for dents or irregularities. · scrape or sand the surface.	*General Industry*, pages 209-217
	Use appropriate audio-visual materials.	
	Have the students apply finishes to wood using a rag or brush stain and sealer, varnish, and deft or lacquer.	
	Use related SRA materials.	School Resource Center
	Allow the students to select and participate in a LAP on finishing.	

OBJECTIVE:

- The student will be able to demonstrate techniques of house construction by erecting a scale-model structure.

PROCESS: Building a Scale-Model Structure. CAREERS: Carpenter.

Developing Core	*Student Learning Activities*	*References*
Scale model-construction can be used in teaching construction details and planning concepts.	Demonstrate how to build a scale-model home, garage, or other building.	*Constructing and Manufacturing Wood Products*, pages 388-425
	Use appropriate audio-visual materials.	*Understanding America's Industries*, pages 22-26
	Arrange a related field trip.	
	Have the students build a model home using a brad driver and nails, blue prints, and whatever materials they require.	
	Invite a resource speaker to discuss entry into the field of carpentry.	
	Use related SRA materials.	School Resource Center
	Allow the students to select and participate in a LAP on building a scale-model structure.	

OBJECTIVE:

- The student will be able to perform house construction processes by erecting a full-size section of a house.

PROCESS: House Construction.

CAREERS: Carpenter, Painter, Plumber, Glazier, Electrician, Roofer, Siding installer.

Developing Core	*Student Learning Activities*	*References*
When pre-historic man first used crude tools to make a shelter for himself, carpentry began.	Demonstrate construction techniques using proper tools and materials.	*Carpentry in Residential Construction*, pages 25-37, 222-227
Construction work requires tradesmen who can work with metal, stone, concrete, and wood.	Distribute information sheets explaining the following: · footing - drain tile · foundation wall · sill · floor joist · sub floor · plate · stud · double plate · ceiling joist · rafter · sheathing · hammers, nails, carpenters' framing square, saw, level, plumb bob.	*Occupations and Careers*, pages 283-294
Building trades employment is seasonal, depending on geographic location.		
Apprenticeship is required in all building trades occupations before becoming a journeyman.	Use appropriate audio-visual aids.	School Resource Center
Construction workers are highly skilled and highly paid.	Supervise the students in the building of a section of a house using proper tools and materials.	
	Used related SRA materials.	
	Allow the students to select and participate in a LAP on carpentry.	

OBJECTIVE:

- The student will be able to construct a masonry wall using bricklaying materials, tools, and equipment.

PROCESS: Bricklaying.

CAREERS: Bricklayer.

Developing Core	Student Learning Activities	References
Bricklaying requires dexterity.	Demonstrate building techniques for a scale-model structure.	*Understanding America's Industry*, pages 122-130
Journeyman skills include the ability to plan and lay out structures and interpret plans.	Distribute an information sheet on the different types of walls and the proper use of materials and tools.	
	Have the students build a scale-model wall.	
	Allow the students to select and participate in a LAP on bricklaying.	
	Discuss entry into a career as a bricklayer.	
	Have the students lay out and build a section of a wall without mortar.	

OBJECTIVE:

- The student will be able to demonstrate plumbing, glazing, roofing, and siding techniques.

PROCESSES: Glazing, Roofing, Siding, Plumbing.

CAREERS: Plumber, Glazier, Roofer, Siding Installer.

Developing Core	*Student Learning Activities*	*References*
A four year apprenticeship is required in becoming a journeyman plumber.	Have the students perform the following plumbing operations: Identify and describe particular skills and areas of work for a plumber. Interpret basic working drawings to determine work aids required and sequence of installations. Measure, cut to size, clean, and solder copper tubing using a tubing cutter, ruler, steelwool, flux, solder, and a Bernz-o-matic torch. Identify various fittings and describe their function and installation. Prepare and select a plan for the installation of a sink, commode, or shower stall. Using the selected plan, fasten the selected fixture using appropriate tools and fasteners. Determine leakage in a system by filling tubing with water and using a hose connection to a sink.	*Carpentry in Residential Construction*, pages 222-225

Developing Core	Student Learning Activities	References
	Repair and maintain plumbing by replacing washers on leaky faucets and opening clogged drains.	
	Identify and compare the advantages and disadvantages of plastic and copper tubing. Discuss the workability, ease of installation, cost and dependability of each.	
A glazier should be able to cut and install glass and plastic materials.	Have the students perform the following operations:	*Occupations and Careers*, pages 283-294
Cutting, removing, and installing glass requires the ability to plan, measure accurately, and use safe work habits.	Identify and list the variety of glass installations that a glazier is required to perform such as skylights, store fronts, display cases, etc.	
	Install a piece of glass according to the following steps:	
	1. Remove broken glass using safe practices and equipment.	
	2. Mark outlines or pattern on glass, and cut glass using glasscutter.	
	3. Remove or break off excess glass by hand or with glasscutter.	
	4. Fasten glass pane into wood sash with glazier points.	
	5. Spread and smooth putty around edge of pane with putty knife to seal joints.	

Developing Core	*Student Learning Activities*	*References*
A roofer should be knowledgeable about types of roofing materials and methods of application. A roofer must be able to plan, measure accurately, and work safely high above the ground.	Have the students perform the following roofing operations: Identify and designate types of roofs and compare the differences in methods, materials, and skills required for each. Prepare a plan for the application of a selected roofing material by determining quantity, equipment, tools, and help needed to complete the job. Complete the job according to the following steps: 1. Cut roofing paper to size and nail or staple it to the roof in overlapping strips to form a base for roofing material. 2. Apply first course of shingles in reverse, and nail shingles to roof. 3. Align roofing material with edge of roof and chalkline. 4. Overlap layers of shingles by lines on shingles. 5. Fasten composition shingles to roof with asphalt cement or nails. 6. Measure and cut strips of flashing and fit them into angles formed by walls, vents, or intersecting roofs.	*Occupations and Careers*, pages 283-294

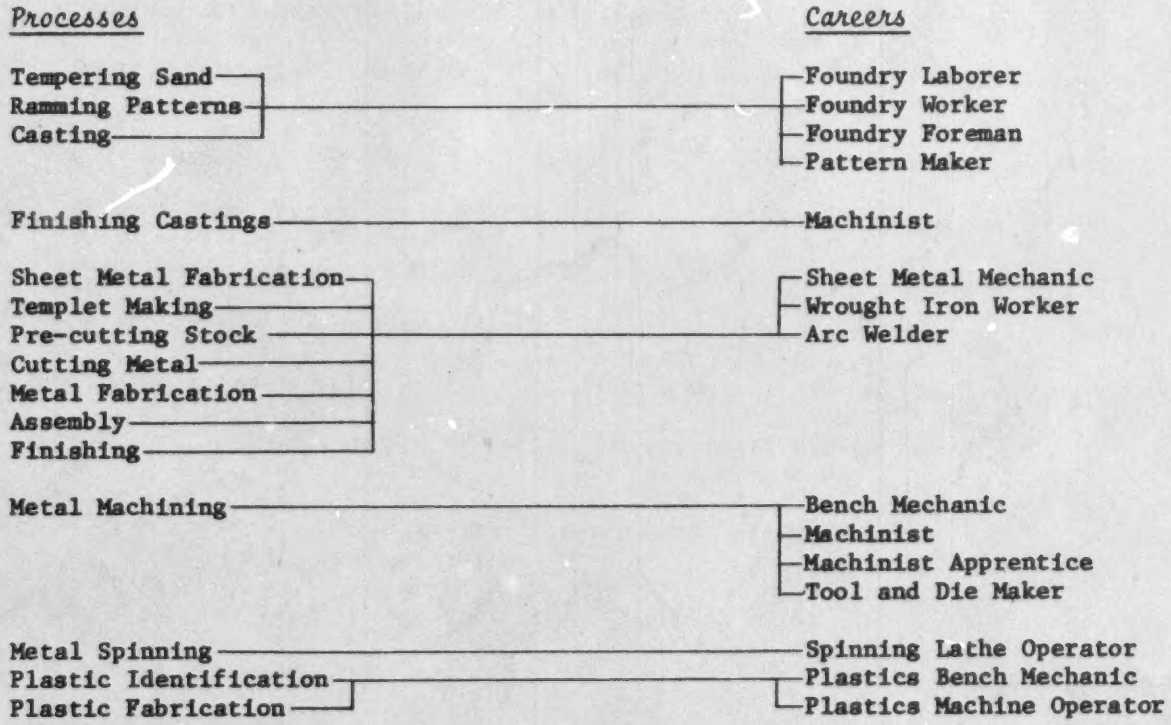
Developing Core	*Student Learning Activities*	*References*
A siding installer is knowledgeable about various siding materials and methods of installation. Siding work is often seasonal.	Have the students perform the following siding operations: Identify and describe types of siding, listing and comparing differences in training required, and tools and materials used. Prepare plan for application of selected siding and complete the installation according to the following steps: 1. Determine insulating or decorative effects desired. 2. Attach tar paper or building paper, using nails or adhesive cement to provide an insulating base. 3. Fasten wood or metal lath using screws or nails. 4. Fit and fasten siding material to laths using rule, measuring tape, handtools, power tools, nails, screws, or bolts. 5. Cut and trim material when fitting siding around windows or corners, using knife or shears. 6. Water proof surface by filling joints or cracks with caulking compound, using putty knife, trowel, or caulking gun.	*Carpentry in Residential Construction*, pages 202-221

Developing Core	Student Learning Activities	References
	General Activities: Invite a resource speaker to discuss entry into building trades. Arrange a field trip to a building site. Have each student identify and select a building trade that is of interest to him, and have him demonstrate that trade by performing the required work on a structure to be built by the class.	

UNIT II - MANUFACTURING

General Objectives

In order to explore the learning activities related to the following Processes and Careers,



The student will be able to:

- Identify and apply manufacturing processes to wood, metal, and plastic products.
- Interpret industrial job requirements for entry level jobs related to a specific manufacturing process.
- Manufacture a product utilizing selected materials and processes used in exploring Learning Activity Packages.
- Temper molding sand by adding sufficient water for metal casting.
- Select and ram a pattern using selected tools and equipment to prepare a mold for pouring.
- Demonstrate the casting process by pouring metal and removing the casting from the mold.
- Select and apply tools and equipment to finish manufactured castings.
- Identify sheet metals by comparing their basic characteristics.
- Demonstrate techniques of layout and design by constructing a templet using selected materials and tools.
- Pre-cut metal stock using foot and hand squaring shears.
- Operate a band saw, scroll saw, coping saw, hand hacksaw, cold chisel, and tin snips to within 1/16 inch of a pattern.
- Demonstrate techniques of forming and bending using a vise, bench plate, stacks, bar folder, forming machine, brake, and basic hand tools to fabricate materials to given specifications.
- Assemble materials using adhesives, soldering equipment, brazing equipment, welding equipment and rivets to insure maximum holding and aesthetic qualities of materials fastened.
- Identify and demonstrate finishing techniques for a product using files, hammers, emery cloth, steel wool, and buffing equipment.

- Identify and apply metal machinery techniques to selected products by operating a lathe/miller to prescribed specifications.
- Demonstrate techniques of metal spinning by operating a spinning lathe.
- List specific qualities of plastic materials to be used in manufacturing selected products.
- Demonstrate techniques of layout, pre-cutting, pattern transfer, shaping, forming, assembling, and finishing by manufacturing plastic products.

OBJECTIVE:

. The student will be able to temper molding sand by adding sufficient water for metal casting, and prepare the mold for casting.

PROCESS: Tempering Sand, Ramming a Pattern.

CAREERS: Foundry Worker, Foundry Foreman, Pattern Maker.

Developing Core	*Student Learning Activities*	*References*
Excessive moisture in sand will cause an explosion during casting.	Demonstrate how to prepare molding sand and how to ram a pattern.	*Metalwork*, pages 162-170
Molding sand must have sufficient water to permit adhesion.	Use appropriate audio-visual materials.	
Patterns must be slightly beveled on the sides so that they can be drawn from the molding sand without damaging the mold.	Have the students prepare the molding sand, pack a sand ball, and break it into two pieces.	
	Have the students prepare a pattern for casting and select and ram a pattern: split and one piece.	

OBJECTIVE:

. The student will be able to demonstrate the casting process by pouring metal and removing the casting from the mold.

PROCESS: Casting.

CAREERS: Foundry Worker, Foreman.

Developing Core	*Student Learning Activities*	*References*
The furnace should be unplugged or turned off when the proper pouring temperature has been obtained.	Demonstrate the proper way to pour metal.	*General Industry*, pages 113-117
Safety clothing and equipment is essential for casting hot metal.	Use appropriate audio-visual materials.	*Understanding American's Industries*, pages 56-60
After the mold has cooled and the flask can be taken apart, care must be taken not to drop wet metal back into the crucible, as an explosion might result.	Have the students prepare the furnace and pour metal: lead, 621° -- aluminum, 1218°. Remove the casting, to be finished at a later date.	
	Demonstrate how to finish a casting, and use appropriate audio-visual aids.	
	Have the students finish a casting according to the following steps: 1. Remove sprues, gates, and risers. 2. File, emery, and steel wool. 3. Grind, mill or turn casting on lathe/miller. 4. Spray or paint casting.	
	Use related SRA materials.	School Resource Center
	Invite a resource speaker to discuss entry level prerequisites in the foundry industry, and have the students select and participate in a LAP on metal casting.	

OBJECTIVE:

. The student will be able to select and apply tools and equipment to finish manufactured castings.

PROCESS: Finishing a Casting. CAREERS: Machinist.

Developing Core	*Student Learning Activities*	*References*
Before a casting can be used, it must be finished. Cutting, filing, grinding, machining, and finishing prepare the casting for consumer use.	Demonstrate finishing techniques for a casting.	*Metalwork*, pages 132-142
	Use appropriate audio-visual aids.	*Understanding America's Industries*, page 67-73
	Have the students finish a casting according to the following steps: 1. Remove sprues, gates, and risers. 2. File, emery, and steel wool. 3. Grind, mill, or turn the casting on the lathe/miller. 4. Spray or paint the casting.	
	Use related SRA materials.	School Resource Center
	Invite a resource speaker to discuss entry level prerequisites in the foundry industry.	
	Arrange an appropriate field trip.	
	Have the students select and participate in a LAP on metal casting.	
	Discuss casting-related careers.	

OBJECTIVE:

. The student will be able to identify sheet metals by comparing their basic characteristics.

PROCESS: Sheet Metal Fabrication. CAREERS: Sheet Metal Mechanic.

Developing Core	*Student Learning Activities*	*References*
Much sheet metal is now used instead of wood. The sheet metals commonly used are iron, galvanized iron, copper, brass, zinc, aluminum, and tin plate.	Demonstrate how to test various types of sheet metal.	*Metalwork*, pages 26-30
	Use appropriate audio-visual materials.	*General Industry*, pages 63-72
A pattern is essential to the making of sheet metal products.	Have the students identify common sheet metals in a written or oral test.	
The ability to accurately transfer a pattern will eliminate missing operations.	Demonstrate proper techniques for templet making, and use appropriate audio-visual materials.	
	Have the students lay out and design a templet using the following methods: 1. Carbon paper 2. Punch marks 3. Draw directly on metal. 4. Prepare wood or plastic template.	
	Demonstrate how to transfer a pattern by direct tracing, carbon paper, and punched holes.	

OBJECTIVE:

. The student will be able to pre-cut metal stock using foot and hand squaring shears.

PROCESS: Pre-Cutting Stock. CAREERS: Sheet Metal Mechanic.

Developing Core	*Student Learning Activities*	*References*
In order to avoid unnecessary waste of materials, metal should be pre-cut.	Demonstrate the correct way to pre-cut metal stock. Use appropriate audio-visual materials. Have the students practice pre-cutting metal with hand and foot squaring shears. Save the pieces of cut metal for use later in making a product. By planning ahead, much time can be saved later. Arrange an appropriate field trip and discuss products and careers related to sheet metal work.	*Metalwork*, pages 44-48 *General Industry*, pages 84-86

OBJECTIVE:

. The student will be able to operate a band saw, scroll saw, coping saw, hack-saw, cold chisel, and tin snips to within 1/16 inch of a pattern.

PROCESS: Cutting Metal.

CAREERS: Sheet Metal Mechanic.

Developing Core	*Student Learning Activities*	*References*
Thin metals can be cut by machine or by hand. Cuts can result if one is not careful when removing burrs or sharp edges from thin-gauge metals. Accurate sheetmetal fabrication is accomplished by the use of sheetmetal machines.	Demonstrate proper metal-cutting techniques. Use related audio-visual materials. Have the students practice cutting metal using each of the following: . band saw . scroll saw . coping saw . hand hacksaw . cold chisel . various snips Arrange an appropriate field trip. Have the students develop skills in fabricating sheetmetal by utilizing machines for specific operations: . squaring shears . bar folder . slip roll . rotary machine . presses Allow the students to perform joining processes feasable for the product being produced: hems and seams; soldering; locked seams.	*Metalwork*, pages 49-54 *General Industry*, pages 87-94

OBJECTIVE:

. The student will be able to demonstrate techniques of forming and bending using a vise, bench plate, stakes, bar folder, forming machine, brake, and basic hand tools.

PROCESS: Metal Fabrication.

CAREERS: Wrought Iron Worker, Sheet Metal Mechanic.

Developing Core	*Student Learning Activities*	*References*
Sheetmetal can be accurately fabricated using the Di-Acro machinery table.	Demonstrate methods of forming and bending. Use appropriate audio-visual material. Have the students practice forming metal using the following tools and equipment: . vise . bench plate and stakes . bar folder . forming machine . brake . other available equipment Arrange an appropriate field trip. Discuss careers in metal fabrication.	*Metalwork*, pages 74-78, 82-86 *General Industry*, pages 109-112

OBJECTIVE:

. The student will be able to assemble materials using adhesives, soldering, brazing and welding equipment, and rivets to insure maximum holding and aesthetic qualities of materials fastened.

PROCESS: Assembly.

CAREERS: Arc Welder, Sheet Metal Mechanic.

Developing Core	*Student Learning Activities*	*References*
Soldering differs from welding in that the metals joined are not melted.	Demonstrate techniques for assembling metals.	*Metalwork*, pages 113-131
		General Industry, pages 129-142
Arc welding is best used when adhering heavy gauge metals.	Use appropriate audio-visual materials.	
Car manufacturers today fasten most automobile parts by welding.	Have the students assemble metal parts using various methods: . adhesive . solder . weld . braze . rivet	
	Use related SRA materials.	School Resource Center
	Arrange an appropriate field trip.	
	Invite a resource speaker to discuss entry into the field of welding and brazing.	
	Have the students select and participate in a LAP on assembling.	

OBJECTIVE:

. The student will be able to demonstrate finishing techniques using files, hammers, emery cloth, steel wool, or buffing equipment.

PROCESS: Finishing.

CAREERS: Sheet Metal Mechanic.

Developing Core	*Student Learning Activities*	*References*
Abrasives are among the most important tools used by industry to cut, shape, and finish metals.	Demonstrate techniques on the finishing of metals. Use appropriate audio-visual aids. Have the students practice finishing metal using the following: . file . hammer . emery . steel wool . buff Use related SRA materials Arrange an appropriate field trip.	*Metalwork*, pages 148-156 *General Industry*, pages 144-151 *Understanding America's Industries*, pages 74-79 School Resource Center

ERIC

OBJECTIVE:

. The student will be able to identify and apply metal machinery techniques to selected products by operating a lathe/miller to prescribed specifications.

PROCESS: Metal Machining.

CAREERS: Bench Mechanic, Machinist, Machinist Apprentice, Tool and Die Maker.

Developing Core	*Student Learning Activities*	*References*
The lathe is a machine tool for cutting metals.	Demonstrate correct operation of a lathe/miller.	*General Industry*, pages 102-104
Use of machinery in finishing castings is the backbone of the machinist trade.	Use appropriate audio-visual aids.	*Metalwork*, pages 132-142
Measuring devices provide accuracy that is helpful in eliminating error.	Have the students make a product using the following operations: . pre-cut stock . layout . cut . finish	
Interpretation of blueprints is required by machinists.	Use related SRA materials.	School Resource Center
Industry uses production flow charts to organize mass production.	Invite a resource speaker to discuss entry levels for machine operator and related occupations.	
Industry uses automatic machines for production. These machines are programmed to produce identical pieces.	Arrange a field trip to see programmed machines in operation.	
	Have the students select and participate in a LAP on the lathe/miller operations.	

Developing Core	Student Learning Activities	References
	Allow the students to use a micrometer to measure selected metal stock.	
	Have the students resharpen a cutting tool using a grinder, oilstone, and center gauge.	
	Ask the students to solve basic problems in machining by selecting and applying appropriate power tools.	
	Trace the machining operations performed by a machinist in finishing a casting.	
	Using a simple blueprint, have the class identify and interpret the machines, operations, hand tools, measuring tools, safety, and materials needed.	
	Have the students organize a simple production flow chart for mass producing a marketable product.	
	Discuss the function and uses of gauges and measuring tools in the machine shop.	

ERIC

OBJECTIVE:

. The student will be able to demonstrate techniques of metal spinning by operating a spinning lathe.

PROCESS: Metal Spinning. CAREERS: Spinning Lathe Operator.

Developing Core	*Student Learning Activities*	*References*
Many beautiful, artistic, and useful articles, can be made from flat pieces of soft sheet metal by pressing them over forms which turn in the lathe.	Demonstrate metal spinning techniques.	*Metalwork*, pages 90-94
	Use appropriate audio-visual materials.	
	Have the students make a product by completing the following steps: 1. Select metal. 2. Select form (chuck). 3. Spin.	
	Use related SRA materials.	School Resource Center
	Invite a resource speaker to discuss entry into the spinning field.	
	Arrange an appropriate field trip.	
	Have the students select and participate in a LAP on metal spinning.	

OBJECTIVE:

. The student will be able to list specific qualities of plastic materials to be used in manufacturing selected products.

PROCESS: Plastic Identification.

CAREERS: Plastics Mechanic.

Developing Core	*Student Learning Activities*	*References*
Unlike wood, plastic is man-made. The long list of different plastics grows year by year as the chemist continues his search for more and better uses.	Display and discuss various types of plastics. Have the students identify samples of plastic materials by means of a written test, oral test, and heating and shaping test. Arrange an appropriate field trip. Discuss careers in the plastics industry.	*General Industry*, pages 219-220 *Understanding America's Industries*, pages 137-142

OBJECTIVE:

. The student will be able to demonstrate layout, pre-cutting, pattern transfer, shaping, forming, assembling, and finishing techniques by manufacturing plastic products.

PROCESS: Plastic Fabrication.

CAREERS: Plastic Mechanic.

Developing Core	*Student Learning Activities*	*References*
Many things which once were made of metal, wood, glass, clay, or leather are now made of plastics because they can be made better and more economically.	Demonstrate techniques of working with plastics. Use appropriate audio-visual materials. Have the students make a product according to the following steps: 1. Select plastic. 2. Layout. 3. Pre-cut stock. 4. Transfer pattern. 5. Shape. 6. Form. 7. Assemble. Use related SRA materials. Invite a resource speaker to discuss entry into the plastics industry. Arrange an appropriate field trip. Have the students select and participate in a LAP on working with plastic.	*General Industry*, pages 225-235 School Resource Center

UNIT III - POWER AND TRANSPORTATION

General Objectives

In order to explore the learning activities related to the following Processes and Careers,

Processes	*Careers*
Electrical Power	Electrician
	Appliance Repairman
	Television Repairman
	Auto Mechanic
	Draftsman
Changing Energy	Electrical Engineer
House Wiring	Electrician
Electronics	Electronic Assembler
	Electronic Technician
	Television Repairman
	Electrical Engineer
Fluid Power	Pneumatics & Hydraulics Technician
	Fluid Control Engineer
Gas Engine Repair	Small Gas Engine Mechanic
	Marine Mechanic
	Automotive Mechanic
Rocket Propulsion	Aerodynamics Engineer
	Jet Mechanic
	Astronaut
Automotive Electricity	Automotive Mechanic

Processes	*Careers*
Mass Transit	Traffic Planning Engineer Model Maker Civil Engineer Highway Designer Structural Engineer Environmental Control Technologist

The student will be able to:

- Perform processes in converting electricity to other forms of energy.
- Solve basic house-wiring problems.
- Identify electronic systems, subsystems, and transducers as they relate to basic electronic systems.
- Apply pneumatic circuits to control industrial machines.
- Identify and repair mechanical malfunctions which occur in two and four cycle gasoline engines.
- Demonstrate rocket principles by constructing and safely launching a model rocket.
- List processes by which electricity is used in the operation of motor vehicles.
- Itemize major features of rapid transit systems being constructed in major cities and other countries.
- Construct a model rapid transit system.

Specific Objectives

- Given an Electronics Aids Concepts of Electricity Demonstrator A1001 Kit, perform one or all of the experiments listed in the laboratory manual.
- Given an Electronic Aids Concepts of Electricity A1000 Kit, demonstrate selected experiments in changing energy from one form to another, applying various forms of energy and analyzing principals of electricity.

- Given an Electronic Aids Wiring Practices PR50 Kit, demonstrate with 100 percent accuracy selected activities dealing with housewiring circuitry.
- Given an Electronic Aids Concepts of Electronics A1200 Kit, select and construct with 100 percent accuracy one or more of the items listed in the laboratory manual.
- Given an Electronic Aids Concepts of Fluid Control Systems A1500A Kit, identify, select, and construct with 100 percent accuracy one or more unit experiments listed in the laboratory manual.
- Given a gasoline engine, identify and repair simple electrical and mechanical malfunctions with *100 percent accuracy*.
- Given a Devry Automotive Electricity Trainer and Laboratory Manual, analyze and construct selected circuits with 100 percent accuracy.
- Construct a model rapid transit system.

OBJECTIVE:

- Given an Electronic Aids Concepts of Electricity Demonstrator A1001 Kit, the student will be able to perform one or all of the experiments listed in the laboratory manual.

PROCESS: Electrical Power.

CAREERS: Electrician, Appliance Repairman, Television Repairman, Auto Mechanic, Electrical Engineer, Draftsman.

Developing Core	*Student Learning Activities*	*References*
Electricity can control body functions as well as mechanical systems.	Demonstrate how body functions can be measured and controlled by electricity.	Electronic Aids A1001 Kit Manual
Electricity can be produced from a variety of metals and chemicals.	Have the students produce electricity using chemicals and metals.	*Understanding America's Industries*, pages 142-174
	Identify and compare cells used to power cars, radios, cameras, etc.	*Industrial Areas: Electricity*, pages 11-18
	Discuss occupations that require a knowledge of electricity.	
	Assign the LAP on electrical power.	
	NOTE: Electronic Aids, Concepts of Electricity Demonstrator A1001, should be used to create student interest in using and creating electricity.	

OBJECTIVE:

. Given an Electronic Aids Concepts of Electricity A1000 Kit, the student will be able to demonstrate selected experiments in changing energy from one form to another, applying various forms of energy, and analyzing principles of electricity.

PROCESS: Changing Energy.

CAREERS: Electrical Engineer.

Developing Core	*Student Learning Activities*	*References*
Human life depends on man's ability to change energy from one form to another.	Demonstrate changing energy from one form to another. Have the students apply various forms of energy to measure and control light, heat, and sound. Have the students define principles of electricity, and apply them by constructing parallel and series circuits; AC and DC current. Discuss circuits used by industry and in the home to make life easier and more comfortable. Assign the LAP on changing and using energy. NOTE: Electronics Aids A1000 Kit and Lab Manual should be used by students in exploring energy. The Devry Electricity Trainer can be used as a supplemental training aid.	SRA Jobs Roles Kit: appliance repairman, electrician *Industrial Arts: Electricity*, pages 19-90 *Occupations and Careers*, pages 285, 291 *General Industry*, pages 256-286

OBJECTIVE:

- Given an Electronic Aids Wiring Practices PR50 Kit, the student will be able to demonstrate with 100 percent accuracy selected activities dealing with housewiring circuitry.

PROCESS: House Wiring

CAREERS: Electrician.

Developing Core	*Student Learning Activities*	*References*
Every electrical system is identical to each water system. Five signs designate out-of-date wiring: . fuse blows . lights blink and dim . television picture wobbles and shrinks . appliances heat slowly . air conditioner works inefficiently Voltage 7 pressure is needed to deliver electricity to your home.	Have the students do the following: . Identify and examine the PR50 Electricity Kit. . Describe safe use of tools and equipment. . Become familiar with electrical hardware. . Demonstrate splicing wire and using insulation. . Study housewiring circuits and materials. . Produce light from electricity. . Produce sound from electricity. . Produce heat from electricity. . Measure power consumption of circuits. . Construct remote control circuits. . Describe the operation of fluorescent lighting circuits. . Explain how thermostats control circuits. . Discuss occupations in the electrical profession. . Complete the LAP on house wiring.	*Sears Simplified Electric Wiring Handbook* *Industrial Arts: Electricity,* pages 91-112

OBJECTIVE:

. Given an Electronic Aids Concepts of Electronics A1200 Kit, the student will be able to select and construct with 100 percent accuracy one or several of the items listed in the laboratory manual.

PROCESS: Electronics.

CAREERS: Electronic Assembler, Electronic Technician, Television Repairman, Electrical Engineer.

Developing Core	*Student Learning Activities*	*References*
Each electronic system contains input, control, output, and a source of power. Controlling and applying the flow of electrons is the basis of electronics. Electronic systems control machines; activate mechanisims causing machines to do work. Electronics controls the precision of manufactured products such as watches, airplanes, and appliances.	Have the students do the following: . Identify components used in the A1200 Kit. . Construct a record player and a public address system. . Construct high fidelity music systems. . Explain the operation of AM receiver systems. . Construct a radio transmitter and receiver. . Define telecommunications, morse code, telemeter. . Explain how radio waves travel in space. . Explain light beam communications. . Describe how to measure current and voltage. . Illustrate how vacuum tubes amplify a signal. . Demonstrate how to use an oscilloscope. . Discuss careers in electronics.	Electronic Aids Concepts of Electronics Laboratory Manual *Understanding America's Industries*, pages 162-173 *Electronics in Action*, pages 45-78

OBJECTIVE:

. Given an Electronic Aids Concepts of Fluid Control Systems A1500A Kit, the student will be able to identify, select and construct with 100 percent accuracy one or several unit experiments listed in the laboratory manual.

PROCESS: Fluid Power.

CAREERS: Pneumatics and Hydraulic Technician, Fluid Control Engineer.

Developing Core	*Student Learning Activities*	*References*
Pneumatic equipment is rapidly spreading because of its tremendous power control capabilities, its simplicity, compactness, economy and ease of control.	Have the students identify and explain subassembly units for the Fluid Power A1500 Kit.	Electronic Aids Fluid Power Fundamentals A1500 Laboratory Manual
	Allow the students to examine automated production assembly systems, clamping, inserting, and pinning sequence.	*General Industry*, page 305
	Have the students construct a pneumatic punch press control with a three-way valve and single acting cylinder.	*Technology*, pages 206-226
	Experiments from Units 3-40 may be selected and completed.	*Power Mechanics of Energy Control*, pages 61-113
	Discuss the opportunities available in fluid power technology.	

ERIC

OBJECTIVE:

. Given a gasoline engine, the student will be able to identify and repair simple electrical and mechanical malfunctions with 100 percent accuracy.

PROCESS: Gas Engine Repair.

CAREERS: Small Gasoline Engine Mechanic, Marine Mechanic, Automotive Mechanic.

Developing Core	*Student Learning Activities*	*References*
Two-cycle engines require a fuel mixture of oil and gas.	Demonstrate the safe use of tools when repairing engines.	Briggs & Straton, Clinton, Sears, Chrysler, Evinrude, and Mercury Handbooks on engine specifications, parts, and repairs
A rapid increase in boating has created a need for marine mechanics.	Discuss the major parts of a two and four-cycle engine.	*Understanding America's Industries*, pages 272-277
Four-cycle engine repair is a prerequisite for repairing car engines.	Have the students dismantle an engine to analyze its working parts.	*Power Technology*, pages 9-101
	Explain how to replace or repair parts such as rings and bearings.	*General Industry*, page 304
	Have the students perform tune-up operations.	*Power Mechanics of Energy Control*, pages 194-228
	Demonstrate cleaning and adjusting carburetors and magnetos, and allow the students to practice.	
	Discuss careers in automotive and marine technology.	

OBJECTIVE:

. The student will be able to utilize principles of rocket propulsion by constructing a model rocket, as well as a launching and recovery system with 75-100 percent accuracy.

PROCESS: Rocket Propulsion.

CAREERS: Aerodynamics Engineer, Jet Mechanic, Astronaut.

Developing Core	*Student Learning Activities*	*References*
Model rocketry stimulates the study of aerodynamics, math, physics, optics, biology, space medicine, astronautics, electronics, photography and psychology.	Have the students study a model rocket design booklet, launcher, and plans for single and multi-stage rockets.	Estes Industries, Inc., Catalog. Box 227, Penrose, Colorado, 81240
	Discuss technical reports from Estes Industries on rocket stability, construction, multi-stage techniques and operations, and rocket altitudes.	Estes Industries Technical Reports *General Industry*, pages 306-308
	Have the students develop launching and recovery systems, and construct a model rocket.	*Power Technology*, pages 140-147 *Understanding America's Industries*, pages 278-279
	Allow the students to launch and retrieve the model rocket.	*Power: Mechanics of Energy Control*, pages 229-239
	Discuss careers in aerodynamics.	

OBJECTIVE:

. Given a Devry Automotive Electricity Trainer and Laboratory Manual, the student will be able to analyze and construct selected circuits with 100 percent accuracy.

PROCESS: Automotive Electricity. CAREERS: Automotive Mechanic.

Developing Core	*Student Learning Activities*	*References*
A knowledge of the fundamentals of automotive electricity is necessary to understand the operation of an auto, truck, tractor, or similar vehicle.	Have the students do the following: . Examine component parts of the Devry Automotive Electricity Trainer Kit. . Demonstrate how batteries provide energy. . Connect electric circuits. . Explain how resistors control current. . Explain how electric motors work. . Explain how generators and alternators work. . Explain how voltage regulators work and operate. . Define how lighting is produced from electricity. . List importance of protective coatings on electronic circuits. . Describe how a spark is produced. . Illustrate how an ignition system works. . Explain how electric indicators work. . Illustrate how indicators indicate fuel level. . Illustrate how oil pressure and temperature are indicated. . Demonstrate how accessory motors are controlled. . Discuss how knowledge of electricity can open doors to related careers.	Devry Technical Institute, Automotive Electricity Lab Manual *Power Technology*, pages 102-122 *Power: Mechanics of Energy Control*, pages 170-174

OBJECTIVE:

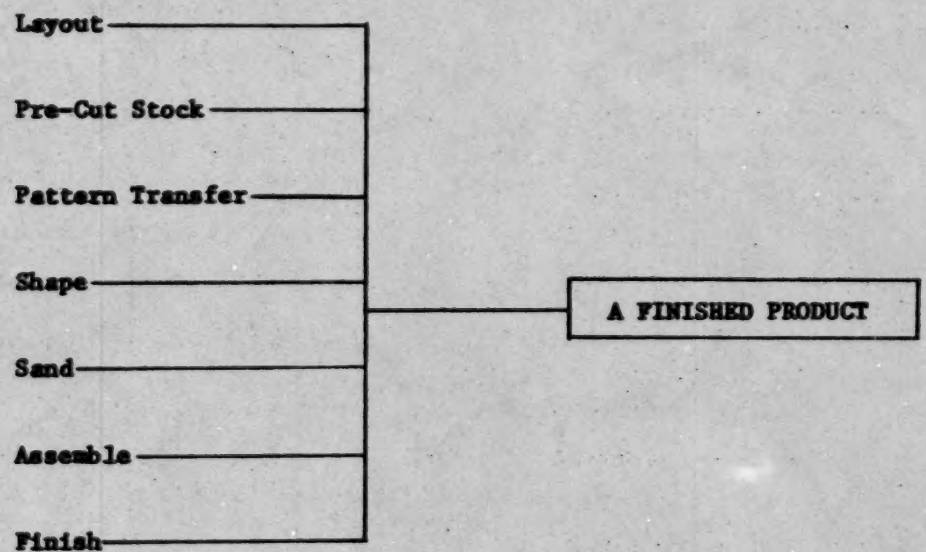
. The student will be able to construct a model rapid transit system.

PROCESS: Mass Transit.

CAREERS: Traffic Planning Engineer, Model Maker, Civil Engineer, Highway Designer, Structural Engineer, Environmental Control Technologist.

Developing Core	*Student Learning Activities*	*References*
Mass transit systems require the latest technology, community involvement, cooperation of elected officials and environmentalist, and skilled and unskilled labor.	Discuss and compare transit systems being planned and constructed in cities, noting their unique features, design technology, and total community involvement. Have the students demonstrate skills by planning and building a scale model rapid transit system. Discuss career opportunities connected with building a mass transit system. Have each student select his role in constructing the transit system, and discuss it in terms of responsibility, training, skills, and industry's future needs.	Bowmar Cassette Editions: "The Age of Electronics" "The Nation's Builders" *Power Technology*, pages 263-267 *Power: Mechanics of Energy Control*, pages 240-247

FLOW CHART FOR WOODWORKING AND PATTERNMAKING



UNIT IV - VISUAL COMMUNICATIONS

General Objectives

In order to explore the learning activities related to the following Processes and Careers,

Processes	*Careers*
Papercutting, Bindery	Book Binder
Type setting, Type Lock Up, Platen Press Operation	Compositor, Pressman
Rubber Stamp, Gold Stamping	Printer
Paper Plate, Planographic Printing, Photocoping	Lithographer, Designer, Platemaker, Duplicator Operator
Mechanical Drawing, Sketching	Draftsman
Photography, Developing Film, Developing Prints	Photographer
Film Cutting, Art Work Layout, Silk Screening	Commercial Artist
Engraving	Engraver
Linoleum Block Cutting	Block Cutter

The student will be able to:

- Explore the Graphic Media as means of communications.
- Develop an avocational interest.
- Identify industrial requirements for specific occupations in graphic arts.
- Demonstrate techniques of paper cutting by using a table and hand lever operated cutters.
- Produce a finished binding product by stacking, stapling, folding, binding, and padding paper.
- Specify type, use composing equipment, handset type, proofread, correct errors, and distribute type.
- Prepare type for printing by locking it in a chase to be used on the platen press.
- Prepare a platen press, insert and lockup the type, and operate a platen press.
- Demonstrate rubber stamp making by preparing an oven, inserting the chase with bakelite, and vulcanizing the rubber.
- Produce a gold stamped product by preparing the machine, inserting the chase, and typing and proofing the finished stamp.
- Demonstrate techniques of making a paper master by using offset materials and tracing machine procedures.
- Prepare and produce a product on an offset duplicator by attaching a master and operating an offset press.
- Identify drafting tools, mount paper on a drawing table, and use the proper tools to produce a design.
- Use good sketching techniques and materials to produce a drawing.
- Demonstrate a knowledge of mechanical drawing equipment and materials by producing a drawing.
- Demonstrate appropriate art techniques by using materials and equipment to prepare a design for a display advertisement.

- Demonstrate a knowledge of photography by using materials and equipment to take effective pictures.
- Develop film by using materials and equipment to obtain a developed negative.
- Demonstrate techniques of print making by using the proper materials and equipment to develop a negative print.
- Cut film using an x-acto knife.
- Produce a silkscreen product by adhering film to silk, masking off, and printing a copy.
- Demonstrate engraving techniques by setting type, inserting material, and producing a finished product.
- Demonstrate linoleum block cutting techniques.
- Produce a metal printing plate by preparing and operating a photocopier.

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OBJECTIVE:

. The student will be able to demonstrate techniques of paper cutting by using a table and hand lever operated cutters.

PROCESS: Papercutting

CAREERS: Bookbinder.

Developing Core	*Student Learning Activities*	*References*
Paper cutting is perhaps the most common of the bindery operations.	Demonstrate proper papercutting techniques. Use appropriate audio-visual materials. Distribute an information sheet which includes basic parts of the cutter as well as safety considerations. Have the students practice using a table paper cutter. Have the students practice using a hand lever operated paper cutter. Dicuss possible careers related to papercutting. Have the students produce cut-paper products for a display.	*Photo Offset Fundamentals*, pages 302-306

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OBJECTIVE:

. The student will be able to produce a finished binding product by stacking, stapling, folding, binding, and padding paper.

PROCESS: Binding.

CAREERS: Book Binder.

Developing Core	*Student Learning Activities*	*References*
The bindery is the end of the line for a job in the print shop. It is in the bindery that the stock is cut, punched, padded, perforated, and covered.	Arrange a demonstration on bookbinding. Distribute an information sheet which includes basic paper folds as well as basic types of binding. Use appropriate audio-visual materials. Have the students produce a stationery notepad, autograph book, or diary, using some or all of the mentioned operations: stacking, stapling, folding, binding, and padding. Use related SRA material, and arrange for a resource speaker who will discuss entry into the bindery industry. Arrange a field trip to a bindery. Have the students select and participate in a LAP on bookbinding. Discuss possible careers in bookbinding.	*Understanding America's Industries*, pages 105-110 *Photo Offset Foundamentals.* School Resource Center

OBJECTIVE:

. The student will be able to identify type, use composing equipment, handset type, proofread, correct errors, and distribute type.

PROCESS: Typesetting.

CAREERS: Compositor.

Developing Core	*Student Learning Activities*	*References*
Hand compositors make up the oldest composing room occupation. Today the majority of type that is set by hand is for very fine composition, usually larger type being used for small jobs where it would be impractical to set type by machine.	Demonstrate hand setting of type. Distribute an information sheet which includes a picture of a piece of type and its parts, a picture of the California Job Case, and the location of the letters within the case. Use appropriate audio-visual materials. Have the students set type, proofread, make corrections, and obtain a copy. Use related SRA materials. Allow the students to use set type to produce a product for display. Arrange for a resource speaker who will discuss entry into composing room occupations. Have the students select and participate in a LAP on typesetting. Discuss possible related careers.	*Understanding America's Industries*, pages 87-88 *Photo Offset Fundementals*, pages 33-48 "Learning to Set Type" 11 min., j-s, SM 593.1 "Typesetting" 35 min., j-2 SM 4593.5

OBJECTIVE:

. The student will be able to prepare type for printing by locking in a chase to be used on the platen press.

PROCESS: Type Lock Up. CAREERS: Compositor, Pressman.

Developing Core	*Student Learning Activities*	*References*
When a job is ready to go to press it is necessary to lock the form into a chase.	Demonstrate proper procedures for locking up type.	*Understanding America's Industries*, pages 87-92
	Distribute an information sheet showing methods of lock-up, and listing related materials and equipment.	
	Use appropriate audio-visual materials.	
	Have the students practice locking up type for the press.	
	Discuss possible careers related to job printing and letterpress composition.	

OBJECTIVE:

. The student will be able to produce a printed product by preparing a platen press, inserting and locking up the type, and operating the press.

PROCESS: Platen Press Operation.

CAREERS: Pressman.

Developing Core	*Student Learning Activities*	*References*
The platen press is found in most small job shops. The principles of form make-up make-ready, roller adjustment, and feeding are basic to a hand fed press.	Arrange a demonstration on the correct operation of a platen press, including inking, changing paper, location of grippers, inserting the chase, and proofing and making adjustments.	*Understanding America's Industries*, pages 91-92 *Occupations and Careers*, pages 310-314
	Use appropriate audio-visual materials.	
	Have the students prepare a press, insert the lock up, and proof, correct, and print stationery, notepads, or self-addressed envelopes.	
	Use related SRA material.	School Resource Center
	Invite a resource speaker to discuss the printing industry, with emphasis on press operation.	
	Arrange a field trip to a printing plant.	
	Discuss career opportunities in printing.	

OBJECTIVE:

- The student will demonstrate rubber stamp making by preparing the oven, inserting the chase with bakelite, and vulcanizing the rubber.

PROCESS: Rubber Stamp Making.

CAREERS: Printer.

Developing Core	*Student Learning Activities*	*References*
Many small printing shops have facilities for producing rubber stamps.	Demonstrate rubber stamp making.	*Graphic Arts*, pages 52-54
	Distribute information sheets showing steps in completing a rubber stamp.	
	Use appropriate audio-visual materials.	
	Have the students prepare the area, turn the oven on, pre-heat the type, and pre-cut the stock. Then, have them produce a rubber stamp by obtaining a bakelite impression, vulcanizing the rubber, and cutting and gluing the rubber to the stock.	
	Use related SRA materials, and arrange an appropriate field trip.	School Resource Center
	Have the students select and participate in a LAP on rubber stamp making.	

OBJECTIVE:

. The student will be able to produce a gold stamped product by preparing the machine, inserting the chase and type, and proofing the finished stamp.

PROCESS: Gold Stamping.

CAREERS: Printer.

Developing Core	*Student Learning Activities*	*References*
Gold stamping is related to the printing industry, since it involves typesetting and form lock-up.	Demonstrate gold stamping techniques.	Literature supplied with the machine
	Distribute an information sheet explaining use of the type case and composing stick, as well as related materials and equipment.	
	Use appropriate audio-visual materials.	
	Have the students prepare the area, select foil, and replace the print sheet. Then, have them insert the composing stick, turn on the machine, and stamp the item.	
	Have the students select and participate in a LAP on goldstamping.	
	Use related SRA materials.	School Resource Center
	Arrange an appropriate field trip.	
	Discuss related careers.	

SEE - 1

OBJECTIVE:

. The student will be able to make a paper master by using offset materials and a tracing machine.

PROCESS: Paper Plate Making.

CAREERS: Lithographer.

Developing Core	*Student Learning Activities*	*References*
In using the direct image master, the copy is drawn, traced, or typed directly on the master.	Demonstrate how to make a paper master. Have the students layout a design on a master, using an offset pen, a pencil, an eraser or typewriter ribbon, and other related equipment. Have the students practice using both the tracing machine and free hand methods. Allow the students to create their own artistic designs and reproduce them. Discuss the various careers that might involve making paper masters.	*Offset Fundamentals*, pages 279-280

OBJECTIVE:

The student will be able to attach a master and operate an offset press.

PROCESS: Planographic Printing.

CAREERS: Designer, Platemaker, Lithographer, Duplicator Operator.

Developing Core	*Student Learning Activities*	*References*
In lithographic printing, the design is reproduced on a flat printing plate. The design on the plate is the same height as the blank, nonprinting areas around it.	Arrange a demonstration on the operation of an offset press.	*Photo Offset Fundamentals*, pages 341-353
	Distribute an information sheet explaining inking, adding of fountain concentrate, and basic operation.	
	Use appropriate audio-visual materials.	
The principle of planographic printing is the repulsion of grease and water to create an image. It is the fastest growing method of printing today.	Have the students design and prepare a paper plate, prepare the machine, attach the master, and print several copies.	
	Allow the students to produce stationery, note pads, games, or autograph books.	
	Use related Science Research Associates materials.	School Resource Center
	Invite a resource speaker to discuss the job requirements and opportunities in lithography.	
	Arrange a field trip to an offset newspaper plant.	
	Have the students select and participate in a LAP on offset duplication.	

OBJECTIVE:

. The student will be able to identify drafting tools, mount paper on a drawing table, and use these tools to produce a design.

PROCESS: Mechanical Drawing.

CAREERS: Draftsman.

Developing Core	*Student Learning Activities*	*References*
The draftsman, like a carpenter, has a set of tools. Learning to use these tools accurately is the major prerequisite for producing accurate drawings.	Demonstrate mechanical drawing techniques.	*General Industry*, pages 44-50
	Use appropriate audio-visual materials.	*Designing Today's Manufactured Products*, pages 91-128
	Distribute an information sheet explaining the use of drafting tools and methods of mounting paper.	
	Allow the students to produce designs using drafting equipment.	
	Use related SRA materials.	School Resource Center
	Have the students select and participate in a LAP on mechanical drawing.	
	Discuss job opportunities in drafting.	

OBJECTIVE:

. The student will be able to use sketching techniques and materials to produce a drawing.

PROCESS: Sketching.

CAREERS: Draftsman.

Developing Core	*Student Learning Activities*	*References*
Man learned to sketch thousands of years before he learned to write. His first letters were simplified sketches.	Demonstrate various sketching techniques.	*General Industry*, pages 51-55
	Distribute an information sheet to explain sketching of horizontal, vertical, and slanted lines.	*Designing Today's Manufactured Products*, pages 153-156
	Use appropriate audio-visual materials.	*General Drafting*, pages 74-83
	Ask the students to produce several sketches. (These can be used later to produce a mechanical drawing.)	
	Use related SRA material.	School Resource Center
	Have the students select and participate in a LAP on sketching.	
	Discuss careers in which sketching is involved.	

OBJECTIVE:

. The student will be able to properly use mechanical drawing equipment and materials.

PROCESS: Mechanical Drawing.

CAREERS: Draftsman.

Developing Core	*Student Learning Activities*	*References*
In making a space capsule or an electric iron, detailed drawings are needed that give the exact physical dimensions, and specifications of the entire object and each of its parts. The workers who draw these plans are draftsmen.	Demonstrate drafting techniques.	*General Industry*, pages 56-57
	Use appropriate audio-visual material.	*Occupations and Careers*, pages 196-199
	Distribute an information sheet explaining the steps necessary to complete a drawing.	*General Drafting*, pages 111-161
	Have the students mount paper and produce a drawing.	
	Use related SRA materials.	School Resource Center
	Have the students select and participate in a LAP on drafting.	
	Invite a resource speaker to discuss entry into the drafting industry.	
	Arrange a field trip to a drafting firm.	
	Discuss careers in drafting.	

OBJECTIVE:

. The student will be able to use proper materials and equipment to prepare a design for an advertisement.

PROCESS: Artwork, Layout

CAREERS: Commercial Artist.

Developing Core	*Student Learning Activities*	*References*
Commercial artists prepare designs for newspaper, magazine, and television advertisements.	Demonstrate layout techniques.	*Designing Today's Manufactured Products*, pages 47-90
	Ask the students to pay attention to newspapers and magazines to secure ideas.	
	Use appropriate audio-visual materials.	
	Have the students produce an advertisement or display using the following: . pencils . charcoal . crayons . inks . papers . paints . drawing equipment	
	Use related SRA materials.	School Resource Center
	Invite a resource speaker to discuss commercial art requirements.	
	Arrange a field trip to an art studio.	
	Have the students select and participate in a LAP on commercial art.	
	Discuss careers in commercial art.	

OBJECTIVE:

. The student will be able to use materials and equipment to take effective pictures.

PROCESS: Photography.

CAREERS: Photographer.

Developing Core	*Student Learning Activities*	*References*
Photographers must be able to use a variety of cameras, lenses, and filters in order to achieve desired effects.	Demonstrate picture taking techniques.	*Photo Offset Foundamentals*, pages 123-143
	Use appropriate audio-visual materials.	*Occupations and Careers*, page 190
	Have the students practice using various pieces of equipment: . camera . lens . filter . film . lighting fixtures	
	Allow the students to practice taking pictures of one another, and of various objects.	
	Use related SRA materials.	School Resource Center
	Have the students select and participate in a LAP on picture taking.	
	Discuss career opportunities in commercial or portrait photography.	

OBJECTIVE:

. The student will be able to use the proper materials and equipment to obtain a developed negative.

PROCESS: Developing Film.

CAREER: Photographer.

Developing Core	*Student Learning Activities*	*References*
In addition to taking pictures, photographers must be able to carry through the chemical and other processing by which pictures are developed, enlarged, and printed.	Demonstrate how to develop film.	*Photo Offset Fundamentals*, pages 208-213
	Use appropriate audio-visual materials.	
	Distribute an information sheet explaining procedures for developing film: . develop . shortstop . fix . wash in water . dry	
	Have the students prepare tray solutions, provide proper safelight illumination, and then remove the film from the camera and process it.	
	Use related SRA materials.	School Resource Center
	Have the students select and participate in a LAP on developing film.	
	Discuss career opportunities in film processing.	

OBJECTIVE:

. The student will be able to develop a negative print.

PROCESS: Developing a Print.

CAREERS: Photographer.

Developing Core	*Student Learning Activities*	*References*
In small shops and photographic departments, the photographer may have to do all the developing and printing work.	Demonstrate print developing.	*Photo Offset Fundamentals*, pages 214-232
	Use appropriate audio-visual materials.	
	Distribute an information sheet explaining the four steps in print processing: . develop . stopback . wash . dry	
	Have the students prepare tray solutions, provide proper safelight illumination, and then attach the negative to the enlarger and develop the print.	
	Use related SRA materials.	School Resource Center
	Invite a resource speaker to discuss photography.	
	Arrange a field trip to a studio.	
	Have the students select and participate in a LAP on print developing.	
	Discuss careers in photography.	

OBJECTIVE:

. The student will be able to produce a silkscreen product by adhering film to silk, masking off, and printing.

PROCESS: Silk Screening. CAREERS: Silkscreener, Commercial Artist.

Developing Core	*Student Learning Activities*	*References*
Adhering the film to the silk is critical so that the solvent does not disolve the film.	Demonstrate silk screen printing.	*Understanding America's Industries*, pages 101-103
	Use appropriate audio-visual materials.	
The ability to mask off areas neatly and accurately is important in printing with two or more colors.	Have the students arrange the materials and equipment, clean the screen and equipment, adhere the film to the silk, mask off the design, and make the print.	
	Allow the students to produce T-shirts, placemats, napkins, pillows, decals, covers, or wall hangings.	
	Use related SRA materials.	School Resource Center
	Invite a resource speaker to discuss silkscreening.	
	Arrange an appropriate field trip.	
	Have the students select and participate in a LAP on silkscreening.	
	Discuss careers involving silkscreening.	

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OBJECTIVE:

. The student will be able to demonstrate techniques of engraving by setting type, inserting material, and producing a finished product.

PROCESS: Engraving.

CAREERS: Engraver.

Developing Core	*Student Learning Activities*	*References*
Engraving machines are used for making plastic and metal signs, plaques, and templates.	Give a demonstration on engraving.	Hermes Engraving Materials; Plastic, Catalog No. A72, Cooper Square, New York, 1972
	Distribute an information sheet explaining the setting and centering of type, placing and centering of material, and locating of cutter.	
	Use appropriate audio-visual materials.	
	Have the students engrave one letter, adjust the cutter, and finish engraving.	
	Use related SRA materials.	School Resource Center
	Arrange an appropriate field trip.	
	Have the students select and participate on a LAP on engraving.	
	Discuss careers involving engraving.	

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OBJECTIVE:

. The student will be able to demonstrate film cutting using an x-acto knife.

PROCESS: Film Cutting.

CAREERS: Silkscreener, Commercial Artist.

Developing Core	*Student Learning Activities*	*References*
Although there are many ways of preparing stencils or screen printing, the most practical, for general purposes, is the solvent-adhering film method.	Demonstrate film cutting. Use appropriate audio-visual materials. Have the students select or draw a design, sharpen the knife, and precut the film. Then, have them tape a design to a flat surface, and tape lacquer film over the design. Discuss careers involving film cutting.	*General Industry*, pages 298-299 *Designing Today's Manufactured Products*, pages 273-274

OBJECTIVE:

. The student will be able to cut a design in a linoleum block.

PROCESS: Linoleum Block Cutting.

CAREERS: Linoleum Block Cutter.

Developing Core	*Student Learning Activities*	*References*
In making a linoleum block plate or cut for printing. the only requirements are a type-high linoleum block and some carving tools.	Demcnstrate cutting a linoleum block. Distribute an information sheet explaining the use of four basic cutting tools and simple or heavy line design. Use appropriate audio-visual materials. Have the students place the design on the block, cut it, proof, and correct. Have the students select and participate in a LAP on linoleum block cutting. Discuss careers involving the cutting of linoleum blocks.	*General Industry*, pages 296-297

OBJECTIVE:

. The student will be able to produce a metal plate by preparing and operating a photocopier.

PROCESS: Photocopying.

CAREERS: Lithographer.

Developing Core	*Student Learning Activities*	*References*
Whenever an inexpensive means of obtaining several copies of an original is desired, the machine used is the photocopier.	Demonstrate photocopying, using items from newspapers and magazines.	*Photo Offset Fundamentals* pages 252-290
	Have the students clean the rollers and glass table of the copier.	
	Have the students prepare the developer, negative paper, and positive paper, and then produce a copy and make adjustments.	
	Use related SRA materials.	School Resource Center
	Have the students select and participate in a LAP on photocoping.	
	Discuss careers involving the photocopier.	

OBJECTIVE:

. The student will be able to make a metal printing plate.

PROCESS: Making a metal plate.

CAREERS: Lithographer.

Developing Core	*Student Learning Activities*	*References*
An offset plate is a thin sheet of metal from which the image is transferred to the offset blanket during the operation of the press.	Demonstrate metal plate making, using items from newspapers or magazines.	*Photo-Offset Fundamentals*, pages 234-325
	Use appropriate audio-visual materials.	
	Have the students clean the rollers and glass table.	
	Have the students prepare the developer, fixer, lacquer, and cotton pads. Then, have them produce a plate.	
	Use related SRA materials.	School Resource Center
	Have the students select and participate in a LAP on metal plate making.	
	Arrange a field trip to an offset printing shop.	